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Lars Ahrenberg

Interrogative Structures of Swedish

Aspects of the Relation between
Grammar and Speech Acts

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Lars Ahrenberg

INTERROGATIVE STRUCTURES OF SWEDISH

Aspects of the Relation between Grammar and Speech Acts

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Abstract

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Swedish constructions that are recurrently used as means of expression of questions are investigated within a model of description that rejects the notion of (literal) sentence meaning. It is argued that such a notion of meaning is untenable and must be rejected as a basis for a linguistic theory of speech acts, the most important reason being that contextual factors enter into the interpretation already of primitive expressions. Questions are analysed as speech acts that involve a specific mode of introduction of a topic into a discourse, where topic is further analysed as a domain of specification to which the participants of the discourse attend, i.e. as a pair of an individual to which attention is focused — referred to as the basis — and a recognized way of informing about that type of individual — referred to as the domain concept. It is further argued that these notions, together with the corresponding notion of a specification, are useful in explicating the contrast between questions, assertions and directives as well as some general aspects of the information structure of linguistic utterances. The same notions are used to account for semantic properties of questions, thus integrating semantic and pragmatic aspects of questions in a unified model of description. As the unity of questions is seen in their function, there is no need to assume that the interrogative structures have structural features in common. Instead the structural description is given in the framework of a context-free phrase structure grammar, the categories of which are complex structures of attributes and values encoding morpho-syntactic surface properties of the different constructions. The behaviour of these constructions as question vehicles is described both informally and in a formalized interpretation procedure. Finally, those structural features that are felt to be characteristic of the Swedish interrogative structures, such as Wh-words, the reversed word order of main clauses and the complementizer *om* (if, whether) are investigated in order to identify clusters of structurally and functionally related uses. It is argued that the interrogative use of these features is only a special case of a more general category which, following the work of Wierzbicka, I call the Ignorative.

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Aspects of the Relation between Grammar and Speech Acts

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Sven Öhman

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PREFACE

For a long time now I have had a curious preoccupation with sentence-types and their meaning. With the completion of this thesis I hope this obsession is over, but I would not bet on it.

Over the several years that this work has occupied my mind I have been given good advice and inspiration by several people and I believe this is the proper place to thank them.

First I wish to thank Jan Anward, my teacher and advisor, for his remarkable ability of getting at the heart of a problem and bringing order into linguistic chaos. Most of all I am obliged to Jan for his continuing support and encouragement at the times when I most needed it. Without it I doubt that this thesis would ever have been completed.

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Linköping, January 1987

Lars Ahrenberg

INTRODUCTION

An important aspect of the meaning of any utterance is its *illocution*, i.e. its communicative function as a statement, promise, warning or question etc. The importance of this aspect of meaning is perhaps best illustrated by the fact that we classify the utterances made by ourselves and others in terms of illocutionary categories. Witness the following examples:

- | | |
|--|---------------------------------------|
| (1) Han påstod att jag var för gammal. | <i>He alleged that I was too old.</i> |
| (2) Men du lovade ju! | <i>But you promised!</i> |
| (3) Vi måste varna dom meddetsamma. | <i>We must warn them immediately.</i> |

and the following authentic exchange, where A, when noting that his first utterance is not received in the way he intended, enforces a new interpretation by means of an illocutionary category:¹

(4)

A: Men får jag fråga dig John, är det inte så, jag har för mig det att, att lönesättningen i LKAB för det jobb du har är högre, det är ett höglönejobb och det tycker jag det ska vara för ni har ett hårt jobb däruppe men nog .., nog ligger era löner högre än dom gör på många andra håll...

B: Nä nä nä nu nu nu ..

A: Ja jag frågar nu

B: Nä nä det är det inte, det är det inte, det är tvärtom, nu ligger vi ju helt .. under andra industriarbeten

A: But can I ask you, John, isn't it right, it seems to me that the wage level at LKAB for your job is higher, it is a well-paid job and I think it should be since you have a tough job up there but still .., your wages are still higher than they are in many other places...

B: No no no now now now ..

A: Well, I'm asking you now

B: No no, it's not like that, not at all, on the contrary we are far below other industrial jobs

¹ -----
From a telephone conversation, broadcast by Swedish Radio, between the then Swedish Minister of Finance and an industrial worker.

It seems that we have no problem in distinguishing such categories, nor in applying them. If we then ask what the basis for this classification is, the naive answer is that we can refer to a communicative act as a question (or warning, promise, etc.) when we hear it as a question (or warning, promise, etc.), i.e. when it, in our way of perceiving the world, is a question.

I do not wish to claim that illocutionary categories come to mind whenever we interpret an utterance. But I do claim that the properties of an utterance that justify a particular illocutionary categorization are important for a proper understanding of it. Hence, these properties also go some way in explaining how utterances are reacted to.

The next thing to ask is what it is that makes a question a question, or, more generally, what it is that makes a communicative act a communicative act of a certain illocutionary type. Austin (1976), who introduced the concepts 'illocution' and 'illocutionary act', set out to investigate them, and his theory was developed by Searle (1969, 1979) into what has become known as Speech Act Theory. Speech Act Theory has been more interested in the "successful and non-defective" (Searle, 1969: 54) performance of an illocutionary act than in its means of expression, but it has nevertheless given us a paradigmatic case of speech act-performance, namely the use of an Illocutionary-Force-Indicating-Device, or, for short, an IFID. An IFID is a part of a sentence which shows what illocutionary act a speaker is performing when he utters that sentence (Searle, *ibid.*, p. 30). Among the IFIDs of English Searle includes: word order, stress, intonation, the mood of the verb, and performative verbs.

According to Searle each illocutionary act is associated with a set of felicity conditions. A felicity condition is only a necessary condition for the successful and non-defective performance of the act in question, but the joint set is sufficient. Some conditions concern the act itself, in particular the sentence used, whereas other conditions concern the context of utterance. The felicity conditions are relevant for the IFIDs, since the rules that govern their use can be derived from (a subset of) the felicity conditions. In particular, to utter the IFID when these conditions hold counts as the performance of the illocutionary act in question. Thus, to utter (5) in the appropriate context cannot but be the performance of a promise. Similarly, to utter (6) in the right context, assuming that a clause with inverted order between finite verb and subject is an interrogative IFID, is to ask a question.

(5) Jag lovar att ringa ikväll.

I promise to call tonight.

(6) Har Erik kommit tillbaka?

Has Erik returned?

Unfortunately, it is the exception rather than the rule that the illocution of an utterance is so explicit. In actual conversation utterances are more likely to look like (4) than like the simple sentences (5) and (6). This is well known, of course, but when linguists have tried to account for the illocutionary properties of sentences within generative linguistic theories, they have mirrored their description on the paradigmatic case provided by Speech Act Theory instead of the facts of language use.

My aim in this study is to contribute to a linguistic theory of illocutions by making a detailed study of one particular illocutionary act, the question, and its linguistic means of expression in one language, namely Swedish. By a linguistic theory of illocutions I then mean a theory which explains how linguistic expressions function as signs of illocutionary acts. I take it that such a theory must enable us to relate the grammatical structure of utterances to the illocutionary aspects of their interpretation via some set of rules, both rules of meaning pertaining to specific linguistic elements and more general rules of interpretation. This in turn requires that we can give an explicit representation of grammatical structure as well as an explicit representation of the relevant aspects of utterance content. However, a sentence, or other grammatical unit, does not in itself constitute an utterance; a context-of-utterance is also required. This raises the question how the context-of-utterance influences the interpretation. In contrast to most generative linguistic theories, which assume that the content of an utterance can be derived from a sentence meaning applied to a context-of-utterance I will argue that context influences interpretation at almost all levels. In fact I will argue that when an utterance is built from a number of primitive linguistic elements (formatives and construction types), they can all, from the point of view of interpretation, be regarded as providing part of the co-text for the others.

The content of the study is organized as follows. The first chapter contains an overview of some modern linguistic theories of illocutions and gives a sketch of an alternative. The second chapter provides characterizations of questions both as illocutionary acts and as conceptual objects, i.e. as problems or issues of some sort. The third chapter summarizes the contextual factors that are crucial in determining question interpretations and also contains a discussion about the representation of contexts-of-utterance. The fourth chapter provides an overview of those construction types — called *interrogative structures* — that can be regarded as conventionalized expressions of questions in Swedish. Their main functions are identified and their grammatical structure is described by means of a context-free grammar employing complex symbols. In the fifth chapter a simple interpretation procedure is outlined which allows us to combine the linguistic and contextual properties of an utterance in the derivation of an interpretation and I then demonstrate how the function of the interrogative structures as question vehicles can be modelled within this framework. In the sixth and final chapter I discuss the polysemy exhibited by the most common interrogative structures, notably *wh*-clauses and *main* as well as subordinate interrogative clauses, and attempt to demarcate the uses that can be considered as forming one class with the interrogative from the ones that are different.

1. LINGUISTIC THEORIES OF ILLOCUTIONS

By a *linguistic theory of illocutions* I mean a theory which aims at explaining how linguistic expressions, and in particular their meaning, contribute to the interpretation of utterances as instances of illocutionary acts. In this chapter I will consider several such proposals. Before looking at the individual proposals (in 1.3), I will spell out their common features (1.1) and give a list of the most crucial facts that any such theory must explain (1.2). Finally, (in 1.4), I will make an evaluation of these proposals and suggest an alternative.

1.1 Characteristic Features.

A common assumption in modern linguistics is that linguistic expressions, from words up to (at least) sentences, have meaning, i.e. some inherent property that is assigned to the expression by a *grammar*. Furthermore, the meaning of sentences, and complex expressions generally, have a direct relation to the meaning of their constituent parts. This relation is expressed as *The Principle of Compositionality* or *The Fregean Principle*, which says, in essence, that the meaning of a complex expression is determined by the meaning of its parts (see e.g. Fodor & Katz (1963), Cresswell, (1973), Hausser (1980) for different formulations). This assumption is basic in all of the different proposals we will consider.

An additional assumption is that when a linguistic expression is uttered, the utterance has the same meaning as the linguistic expression itself, at least in the normal case. In the words of Searle (1975:59),

"The simplest cases of meaning are those in which the speaker utters a sentence and means exactly and literally what he says."

This statement may be taken not only as a statement about simple cases of meaning but also as an expression of a linguistic ideal. Thus, the ideal case of linguistic meaning is when an expression can be attributed a single, well-defined meaning which any utterance of that expression exhibits. No doubt the linguist has borrowed this ideal from the logician, but as a linguist he is of course aware that natural languages seldom live up to the ideals. The conflict this has created seems to have had two outcomes; on the one hand linguists (aided by logicians) have tried to incorporate as much of linguistic reality under the ideal, thereby embarking on a process of

regimentation of natural language (esp. Montague (1974) and his followers among linguists) and on the other hand there has been a rather unrestrained hunt for pragmatic factors that can fill the gap between ideals and reality (cf. Sonesson, 1978).

The pragmatic factors become necessary as soon as it is realized that the meaning of a sentence is not sufficient to account for its use as the vehicle of a speech act. This means that a special pragmatic theory has to be worked out to account for the cases that go beyond sentence meaning. There may be disagreement as to what the crucial pragmatic factors are, but the following are often included: background knowledge, principles of rational action and cooperative communication, conditions on speech acts and inference capabilities.

Generally speaking the rules of linguistic pragmatic theories take the form of rules for the use of meanings. They may be very specific as e.g. the Conversational Postulates of Gordon&Lakoff (1975), or general as the Conversational Maxims of Grice (1975), but they leave the meanings unchanged and are thus not part of the grammar, i.e. not part of the rules that account for the "linguistic" competence of a speaker.

The linguistic ideal is based on the assumption that there is an equivalence between expression and meaning (cf. Eco, 1984); wherever the expression occurs, the meaning is also present. The necessity of a pragmatic theory of illocutions destroys the unity of meaning, however, and supplies us with at least two different kinds of meaning, the first being called *sentence meaning*, or *literal meaning*, and the second being called *utterance meaning* or *speaker meaning*. The first kind of meaning is then an inherent property of a linguistic expression, whereas the second is not; it can only be attributed to an utterance of the linguistic expression.

The utterance meaning is usually expressed as another sentence meaning and related to the original sentence meaning as an inference. Naturally, the utterance meaning can not be inferred directly from the sentence meaning, since then it would after all be part of the inherent meaning, but it can be inferred from the sentence meaning in conjunction with contextual facts (shared background knowledge, conversational principles, etc.). The inferential process by which the utterance meaning is reached is not a deduction, it is more of a probabilistic reasoning, yielding a negotiable result, unless awarded the status of a rule. Thus, it differs from the process of deriving a sentence meaning, which supposedly is automatic, given a grammar.

1.2 Some Problems for Linguistic Theories of Illocutions.

In this section I will give a list of problems that every linguistic theory of illocutions will have to account for one way or another. Some of these problems are related to apparent facts of natural language, whereas others are theory-dependent, i.e. more or less induced by the theoretical assumptions I have related above. As far as possible I

will illustrate the problems with interrogative structures and questions.

1.2.1 *The Ubiquity of IFIDs*. Putative IFIDs, especially clause-types, very often occur in utterances whose primary speech act category seems to be something different from what we would expect given the assumed meaning of the IFID. This has often been referred to as the problem of Indirect Speech Acts (Searle, 1975). For instance, an utterance of an interrogative clause may be categorized as follows:

-Får jag säga en sak här, ...	Interruption
- <i>May I say something at this point, ...</i>	

-Jaså, var det bara du.	Statement
- <i>Oh, it was you.</i>	

-Hämtar du en stol, är du snäll?	Request
- <i>Will you get a chair for me, please.</i>	

-Är han inte underbar!	Exclamation
- <i>Isn't he marvellous!</i>	

1.2.2 *The Optionality of IFIDs*. Speech acts may be performed without the use of their typical IFIDs. In fact, as we saw from (1), they very often seem to be performed with the use of an IFID that does not belong to them. A nexus-question may be conveyed by any of the following:

Main Interrogative Clause: Är det min tur?
Is it my turn?

Subordinate Interrogative Clauses

either (a) embedded:	Jag undrar bara om du är hemma ikväll? <i>I just wondered if you'll be home tonight?</i>
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or (b) non-embedded:	Javisst, om det passar för dig? <i>Sure, if it's all right with you?</i>
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Declarative clause:	Det var Per du hette? <i>Your name was Per, (wasn't it)?</i>
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Single phrase:	Per? <i>Per?</i>
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1.2.3 *The Possibility of Multiple Categorizations.* It is possible to categorize an utterance in many different ways, even as an illocution, without any of the categorizations being more fundamental than the others. This is a problem not only for linguistic theories of illocutions, but for Speech Act Theory generally, since it makes it difficult to view a conversation as a simple sequence of illocutions (cf. Levinson, 1983). For example, when a nexus-question is asked by means of an interrogative clause, it may nevertheless also be something else;

-Kan det vara Neapel, tro?	Question and Guess
- <i>Could it be Naples?</i>	
-Har du en penna?	Question and Request
- <i>Have you got a pen?</i>	
-Vet du om att Lisa fått en bebis?	Question and Assertion
- <i>Did you know that Lisa had a baby?</i>	
-Varför frågar du det?	Question and Response
- <i>Why do you ask?</i>	

1.2.4 *The Interchangeability of Verbal and Non-Verbal Acts.* What is accomplished by verbal means may also be accomplished by non-verbal means, as when I point to someone and simultaneously show a questioning face to indicate "Is she the one you mean?". Furthermore, communicative and non-communicative acts are intertwined in many activities, such as when I shout for my partner to pass the ball in a game of football, and he does so, or when I thank someone for giving me something. Again this is a problem for Speech Act Theory as a whole, since it points to a need for a more comprehensive unit for a theory of communication than the illocution. It is also a challenge to linguistic theories generally, however, because it indicates that words are similar to non-linguistic signs in the way they signify.

1.2.5 *The Boundary between Equivalence and Inference.* This problem is theory-dependent and is perhaps more often stated as a problem of drawing a boundary-line between semantics and pragmatics. For a discussion in these terms see Katz, 1977; Gazdar, 1979; Allwood, 1981 and Levinson, 1983. It poses a problem for any theory that makes a division between different kinds of meaning in the way that modern linguistics does.

As an illustration consider the paradigmatic case of indirect speech acts, the use of modals and interrogative clauses in requests:

- (1) Kan du hjälpa mig med väskorna?
Can you help me with my luggage?

Most accounts of such sentences ascribe to them a literal meaning equivalent to "I ask you whether you have the ability to help me with my luggage", or, if we skip the performative formula, "This is a question about Hearer's ability to help Speaker with Speaker's luggage" (e.g. Searle, 1975; Gordon&Lakoff, 1975; Perrault & Allen, 1980), i.e. it is given to us from the meaning of the linguistic expression used that (i) its utterance is a question, and (ii) it is a question about the hearer's ability in some respect. The first meaning would be attributed to the interrogative clause-type and the second meaning to the verb *can*. On the other hand, the request interpretation is the result of an inference, taking features of the context and assumed principles of communicative action into account.

1.2.6 *Speech Act Idioms*. If one makes a major distinction between meaning and use, there will always be a number of examples that fall somewhere in between. In the case of IFIDs such examples have been called Speech Act Idioms. There is a clear difference between the sentences in (2) below and those in (3). The first set are idiomatic forms of requests, whereas the second are non-idiomatic requiring quite specific contexts.

- | | |
|----------------------------------|--|
| (2)a. Kan du stänga fönstret? | <i>Can you close the window?</i> |
| (2)b. Stänger du fönstret? | <i>Will you close the window?</i> |
| (3)a. Skulle du stänga fönstret? | <i>Were you going to close the window?</i> |
| (3)b. Drar det inte väl kallt? | <i>Isn't it a bit draughty?</i> |

The problem is how to classify the speech act idioms. Either they can be treated as real idioms, so that they are regarded as ambiguous expressions, or they can be assimilated to the other group of non-idiomatic expressions and be treated pragmatically. In either case they must be properly related to the more paradigmatic instances of their respective category.

1.2.7 *The Vagueness of Illocutions*. By the vagueness of illocutions I mean that it is sometimes not so easy to say whether a particular illocution has occurred or not. What is worse, at least for Speech Act Theory, is that it seems to make very little difference if we decide one way or the other. Consider the following dialogue:

(4)

A: Jag vill ha reda på numret till en kille som heter N.N och bor på Storgatan 20.
B: Jaha, det är 12 34 56.

A: *I'd like the number of a guy called N.N who lives at Storgatan 20.*
B: *Let's see, it's 12 34 56.*

The problem is: has A asked a question or has he not? Superficially there is no

question indicator in the utterance, not even intonation, but A has, as is normal in questions, definitely specified a subject-matter on which B can give information. Now, A might have started by saying: *Jag har en fråga, jag vill ha reda på ...* (I have a question, I'd like the number ...). Would it then not be a question? Yet the difference between the two cases is only marginal and seems to have no important effect on A's message to B. The problem is, however, that from the point of view of linguistic theories of speech acts it ought to make a difference, since if we choose one way we ought to expect an IFID and, if we choose the other way, we ought not.

1.2.8 *IFIDs and locutionary meaning.* The last problem concerns the relation between illocutionary meaning and "propositional" meaning. Speech act theory suggests that IFIDs are different kinds of expressions than ordinary words. The problem is thus to account for the similarity and difference between utterances such as the following:

- | | |
|--|---|
| (5)a. Jag lovar att komma. | <i>I promise to come.</i> |
| (5)b. Han lovade att komma. | <i>He promised to come.</i> |
| (6)a. Jag kräver att han kommer. | <i>I demand that he comes.</i> |
| (6)b. Hon krävde att han skulle komma. | <i>She demanded that he would come.</i> |

On the one hand the a-members of each pair are not assertions, the speaker does not (just) inform the addressee of what he is doing, he is doing it. On the other hand verbs like *lova* and *fråga* are ordinary verbs of the language that can be used as the main predicates of ordinary assertions. Yet, when they occur in performative sentences, they have become part of an IFID, an expression with a special meaning. The problem is, in short, do they or do they not have the same meaning in the different contexts, and if not, what is the difference?

1.3 Different Theories.

1.3.1 *Ordinary Speech Act Theory.* Searle's account (Searle, 1969, 1975, 1979a) of illocutions and IFIDs is not in the first instance a linguistic theory, but it has had a great impact on linguistic theorizing by providing a paradigmatic case of how illocutions are brought about. It is therefore appropriate to start with Searle and those works that basically follow his position (e.g. van der Auwera, 1980; Morgan, 1978; Perrault&Allen, 1980).

The basic idea of Searle's theory is that there exist in a language certain expressions, called IFIDs, which have a literal meaning as indicators of some specific Illocution and whose usage is constrained by the felicity conditions of that illocution. I will, following Levinson (1983), refer to the assumed literal meaning of IFIDs as their *literal force*. Putative examples of IFIDs are the performative formulas and clause-types (sentence

mood).

Searle's analysis have a Gricean flavour (Grice, 1957; 1975) in several respects. His paradigm condition for the performance of illocutionary acts is the following, where S refers to the speaker, H to the hearer and T to some linguistic expression (Searle, 1969:60):¹

"S intends (i-1) to produce in H the knowledge (K) that the utterance of T is to count as /illocution I/. S intends to produce K by means of the recognition of i-1, and he intends i-1 to be recognized in virtue of (by means of) H's knowledge of the meaning of T."

It doesn't follow from this that the meaning of T is couched in illocutionary terms, but this is obviously what Searle has in mind. His crucial rule for the use of IFIDs makes this evident; it is the utterance of an IFID that counts as the performance of the illocutionary act, while other pertinent factors such as propositional content and contextual properties are only part of regulative conditions on the use of the IFID.

Searle is well aware that IFIDs are not always used. His only comment on this is that this is possible "where the context and the utterance make it clear that the essential condition /i.e. the one concerning the illocutionary point/ is satisfied" (ibid., p. 68). Nothing is said about how in such cases parts of the utterance or the context can be signifiers of an illocutionary intention.

Searle is also well aware that utterances can be categorized in many different ways and he offers an example of his own. This is not a problem for him, however, as he claims that a single utterance can be performed with several different intentions and that

"we must not suppose, what the metaphor of "force" suggests, that the different illocutionary verbs mark off points on a single continuum. Rather, there are several different continua of 'illocutionary force', and the fact that the illocutionary verbs of English stop at certain points on these various continua and not at others is, in a sense, accidental." (ibid., p. 70).

But if verbs stop at certain points on the various continua, it becomes something of a mystery how the utterance of an IFID, which often crucially contains a single verb, can exhaust the illocutionary force of an utterance.

However, Searle (1975) offers a theory of indirect speech acts, i.e. speech acts in which "a sentence that contains the illocutionary force indicators for one kind of illocutionary

¹ In the text this condition is actually stated with reference to promises, but it is meant to have a general application.

act can be uttered to perform, in addition (Searle's emphasis), another type of illocutionary act" (ibid., p. 59). It is not clear whether direct and indirect speech acts exhaust the range of all possible speech acts, but probably they do not as hints and insinuations are mentioned as alternative, but separate cases where the sentence meaning is not equal to the utterance meaning.

Searle's account of indirect illocutions contains the following crucial ingredients:

- (1) The utterance has the illocutionary force (IF) associated with the IFID that has been used,
- (2) This IF is not the primary IF of the utterance,
- (3) On the assumption that the speaker follows the principles of conversational cooperation (Grice, 1975) and acts in accordance with the rules of speech act sequencing, the hearer can infer that the literal meaning of the utterance is irrelevant,
- (4) Therefore, even though the literal meaning is intended, the hearer can infer that the primary IF is different from the literal force (or, alternatively, the same, but with a different propositional content),
- (5) If the literal meaning of the utterance alludes to a felicity condition of some illocutionary act that the context-of-utterance allows or suggests, then that IF should be taken as the primary force of the utterance.

The allusion to felicity conditions is made more precise in some generalizations where Searle spells out in detail how the allusion can be made, e.g. it is possible to perform a request by either stating or asking whether a preparatory condition or a condition on propositional content holds, but if reference is made to a sincerity condition, it can only be stated. Compare the following sentences as vehicles of requests.

STATEMENTS:

- | | |
|---|---------------------------------------|
| (7)a. You can take out the garbage. | (a preparatory condition on requests) |
| (7)b. You take out the garbage. | (a propositional content condition) |
| (7)c. I want you to take out the garbage. | (a sincerity condition) |

QUESTIONS:

- | | |
|---|------------------------------|
| (8)a. Can you take out the garbage? | |
| (8)b. Will you take out the garbage? | |
| (8)c. @Do I want you to take out the garbage? | (uninterpretable as request) |

This reference to felicity conditions seems to imply that the existence of indirect speech acts can be taken as a support for Speech Act Theory rather than as a problem for it. As has been pointed out by van der Auwera (1980: 56f), however, there are many discrepancies between the factors that can be alluded to in an indirect illocution and the factors that make the illocution felicitous. On the one hand there are felicity conditions that can not be alluded to at all, e.g. the obviousness condition and, on the

other hand, some of the allusions you can make in an indirect request, such as reasons for carrying out the action requested, are not related to the felicity conditions of requests. Of course, we may note this as a mistake on Searle's part and include reasons for doing a requested act as part of a felicity condition. But the step from felicity condition to illocution seems in any case to be too swift. There are, to mention just one example, many illocutions whose propositional content condition refers to futurity, among them requests, commands, advice and taking oaths, so how do we pick the right one?

Thus, felicity conditions may after all not play the crucial role that Searle believes. What is needed is something more general. Van der Auwera (ibid.) suggests that the Gricean notion (Grice, 1975) of *implicature* should be generalized to illocutionary forces as well. It would then be possible to view the primary IF of an indirect speech act as an implicature, derived conversationally in the Gricean way or, in case a conventional formula, such as *Can you VP*, *Will you VP*, is used, by a "short-circuit" (Morgan, 1978:274-75). A short-circuited implicature is an implicature, but one that has become common usage, which means that it does not in fact have to be calculated by someone who is familiar with the usage. Yet, Morgan warns us, we should not say that the implicated force has become part of the literal meaning of the used expression, because we must distinguish between matters of meaning and matters of usage. In the case of such "Indirect IFIDs" as those mentioned, the implicature is still transparent and so is the literal meaning and therefore, by invoking ambiguity, we would only pollute the description unnecessarily.

However, the rejection of felicity-conditions as a means to reach IF-interpretations has made it more difficult to explain how such interpretations come about. Van der Auwera's summary of his core idea, namely that "if a literal meaning is judged irrelevant and if no non-conversational normative principle is allowed to play a part, such as "Be polite!", the literal meaning is matched with the context" (ibid., p. 61), is not very helpful, since we are not told which of all possible aspects of the context can be relevant. Van der Auwera himself mentions the speaker's apparent needs and concerns, as well as his authority vis-a-vis the hearer, but this is still vague. Furthermore, while the importance of both literal meaning and context is stressed, we get nothing but informal descriptions of occasional examples to account for their interaction.

Formal accounts of Indirect speech acts have been put forward by Perrault&Allen (1980) and Brown (1980). They both emphasize that speech acts must be seen as a particular type of action and ground their respective analyses on general models of action. P&A's description can be seen as a development of Searle (1975), whereas Brown's description has more in common with Gordon&Lakoff (1975), which will not be treated until the next sub-section. A discussion of Brown's work will therefore be postponed until then.

For Perrault&Allen the IFID is not directly related to an Illocutionary Force. Instead clause-types, which are the type of IFID they consider, are directly associated with a "literal" intended effect. The intended effect associated with an interrogative clause is that H (the hearer) should believe that A (the speaker) wants H to inform A on some topic. Questions are thus analyzed as a particular type of request. The intended effect associated with an imperative is that H should believe that A wants H to do the action specified in the imperative sentence. To utter sentences of specific clause-types is furthermore called to perform "surface-acts", i.e. to utter an imperative sentence is to perform a surface request or, in the terminology employed by P&A to S.REQUEST.

Given that someone utters a sentence we may thus infer some intended effect on the utterer's part. This first inference is the starting-point for a chain of inferences which is based on rules for plan-construction and plan-inference. These rules frequently make reference to one of the following three pairs, where the first member of the pair is called the X-part and the second member the Y-part.

<u>X</u>	<u>Y</u>
ACT	Effects of ACT
Preconditions of ACT	ACT
Body of ACT	ACT

The idea is that in plan-construction rules we go from intentions about Y-members to intentions about X-members, whereas in plan-inference rules we go the other way. As an example, consider the rule PI.BA (Body-Action Rule):

For all agents H and A, if X is part of the body of Y and if H believes that A wants X done, then it is plausible that A wants Y done.

First it should be noted that the conclusion is not logically necessary, it is only a plausible conclusion. The number of such conclusions may grow quite large, so there is a set of "rating heuristics" that rate their plausibility. Second, the body of an illocutionary act has the form of a hearer belief, just as the intended effects associated with sentence-moods. A literal interpretation may thus be derived in a straight-forward manner. Consider the utterance of a sentence such as *Pass the salt*. We are then allowed to plausibly infer the intended effect that "H believes that A wants H to pass the salt (to A)" and from this, through the plan-inference rule PI.BA, that another intended effect (plausibly) is that "A requests H that H pass the salt to A". However, given the varied set of inference rules that P&A employs, a literal interpretation is usually not the only possibility, but a large variety of indirect interpretations are possible. Consider their derivation of a request-interpretation of the sentence *Can you reach the salt?* (ibid., p. 78), where B stands for the predicate 'believe' and W stands for 'want', which is a predicate that covers both ordinary *want*

and *intend*):

- (a) B(h, W(a, INFORMIF(h, a, CANDO(h, REACH(h, SALT))))
- (b) B(h, W(a, KNOWIF(a, CANDO(h, REACH(h, SALT))))
- (c) B(h, W(a, CANDO(h, REACH(h, SALT))))
- (d) B(h, W(a, REACH(h, SALT)))
- (e) B(h, W(a, HAVE(h, SALT)))
- (f) B(h, W(a, PASS(h, a, SALT)))
- (g) REQUEST(a, h, PASS(h, a, SALT))

The starting-point is the inferred intended effect of the surface act. The next step is based on a transition from acts to effects, since if someone is informed about a topic the effect will be that he has information about that topic. (c) is inferred on the basis of a rule that says that if someone wants to know whether a proposition holds he (plausibly) wants the proposition to be true. (d) is a step which comes from replacing a precondition for an action with that action. (e) is related to (d) as an effect to an action, and (f) to (e) as an action to one of its preconditions. Finally, we reach the interpretation through the rule PI.BA stated above.

It should be noted that once we have inferred the literal intended effect there is no more reference to the form of the utterance, nor is there any reference to the context-of-utterance. Thus, P&A cannot account for the difference between indirect requests involving *can* and those involving *be able to* or *have the ability to*, nor can they allow contextual factors to influence the derivation. In their view, however, it is important to make a difference between a competence theory of indirect speech acts and a performance theory, and what they offer is a competence theory, i.e. an account of what indirect speech acts may look like, given certain assumptions on the nature of communicative action and the logic of predicates such as BELIEVE and WANT. This idea of 'competence' must of course be distinguished from the competence concept common in linguistics (Chomsky, 1957, 1965) as it does not at all deal with linguistic competence, but rather inferential competence. What P&A offer is a view of linguistic meaning as simple and straight-forward, at least as far as clause-types are concerned, assuming instead a set of language independent, "universal" meanings, in terms of which speaker intentions can be described, and a calculus for relating different speaker intentions. A speaker intention may thus be the signifier of another speaker intention including intentions to perform illocutions. In fact, they offer no other way to reach an illocutionary interpretation than through speaker intentions about effects of utterances. In this way, although they claim adherence to Searle, their analysis is deviant from ordinary Speech Act Theory, as it defines illocutions through, or with reference to, perlocutionary effects.

For Searle the performance of illocutionary acts definitely means conforming to conventions. He allows for natural ways of making one's intentions recognized (1969: 38), but regards these as untypical. He also allows for non-verbal IFIDs, but assumes that these can be accommodated in his theory. The typical way of performing an

illocution is to do something that *counts as* doing just that according to a constitutive rule, or some small set of such rules. Since the act itself is constituted by the rules, i.e. not even thinkable without them, there must be some way of invoking the rules. And the IFID does just this:

"For the case of promises and statements there must be some conventional elements the utterance of which counts as an undertaking of an obligation or the commitment to the existence of some state of affairs in order for it to be possible to perform such speech acts as promising or stating." (ibid., p. 40).

However, it does not follow that the IFID must be some simple expression. For Searle, playing a game means that one follows a large set of constitutive rules, but performing illocutions in the typical case only means to act in accordance with one constitutive rule (and some regulative ones), i.e. the one that "counts as" performing the illocution. The idea that IFIDs can be structurally complex seems never to occur to him. Now, Searle's primary interest is not the expressions that specific languages use to perform illocutions with, but "the underlying rules which the conventions manifest or realize" (ibid., p. 41). Still, it is unfortunate that the paradigmatic case he offers is linguistically so simple-minded. After all, and if we are to follow the analogy between games and linguistic communication, there is no simple gesture which "counts" as taking a penalty kick or tackling an opponent in a game of football.

1.3.2 *Illocutions as Signifiers*. A slightly different way to describe indirect speech acts is to say that they are speech acts in which the speaker performs one illocution by way of performing another. One illocution thus functions as the sign of another. To express it this way means that indirect speech acts are regarded as more of a regular phenomenon and the task of the linguist becomes that of describing the different possibilities and to find some general explanations for them. The rules necessary for this task have been referred to as "illocutionary force conversion rules" by Levinson (1981).

The first attempts in this vein are Labov (1972) and Gordon&Lakoff (1975). G&L relate the primary illocution² to the literal one through a set of *Conversational Postulates* and a notion of *conversational implication*: a logical structure, L, conversationally implies a proposition, P, if and only if in some context CON, given some conversational postulates, CP, L entails P, where the notion of entailment is the usual one relating sentences to other sentences.³ The conversational postulates that G&L illustrate their proposal with are specific to requests and are summarized as follows (ibid., p. 86):

- - - -

² I continue to use Searle's terminology here. For G&L, the literal force is primary.

³ To be more exact, the notion of entailment used is the one of Lakoff's "Natural Logic" (Lakoff, 1970).

"One can convey a request by (a) asserting a speaker-based sincerity condition, or (b) questioning a hearer-based sincerity condition."

A sincerity condition is a kind of felicity condition relating to the intentions and assumptions of the speaker, e.g. that the speaker wants the hearer to perform the action requested and that he assumes that the hearer is able to do it. The nice thing about conversational postulates is that we get a direct link between the literal meaning and the utterance meaning. Another thing, stressed by G&L, is that rules of the grammar are apparently sensitive to conveyed meanings. An example discussed by them is the sentence (9) which may be both a question and an (exclamative) suggestion to the contrary, and its apparent transform (9'), which can only have the second interpretation.

- (9) Why are you painting your house purple?
(9') Why paint your house purple?

Thus they argue that a grammar must contain so called transderivational rules, i.e. rules that refer to two different derivations simultaneously.

A problem with conversational postulates is that they are as arbitrary as meaning postulates. One would like an explanation for why they are the way they are. Another problem is that they can not account for all aspects of illocutionary interpretations. G&L note some problematic cases themselves. One can not simply go on adding conversational postulates for every new case of indirect speech act forms, and so it is a problem to find the correct generalizations. Attempts at formulations on a reasonable level of abstractness often turn out to be too strong, e.g. a literal request for permission to remind seems to work as a reminder, but a literal request for permission to accuse does not come out as an accusation. Compare:

- (10) May I remind you of your meeting this afternoon?
(11) May I accuse you of stealing my cigarettes?

Brown (1980) argues for a description that regards speech acts as a particular specimen of actions. Her account of ISAs, on the other hand, is based on the assumption that they are special communicative devices and therefore need special rules. However, it is possible to give a general and uniform explanation for these rules by linking them to very general principles of action and communication, as those proposed by Grice (1975). Thus she takes a step forward compared with G&L.

As an example of an indirect speech act rule, consider the following:

Rule UNMARKED-ASK: The speaker can convey a speech act indirectly by an *ask* of the topic of an unmarked precondition of the speech act (ibid., p. 156)

An unmarked precondition is a precondition that either of the participants may assert or ask about depending on which of them has the better knowledge of it. As examples, Brown give the following two unmarked preconditions for requests:

- (a) (The speaker believes that) the addressee can take responsibility for carrying out the action;
- (b) (The speaker believes that) the addressee is obligated to the speaker (and possibly to others) to take responsibility for carrying out the action.

It should be noted that preconditions play an essential role in Brown's analysis of actions. In general actions are analyzed into two parts: argument specifications with constraints and a procedural body. A precondition is a constraint on some argument of the action.

The rule UNMARKED-ASK is applicable in a context where the speaker believes that the hearer has better knowledge of the precondition (that is why the speaker asks rather than asserts). It is meant to explain indirect requests of the following types:

- (12) Can you close the door?
- (13) Have you got a hammer to put up the hook?
- (14) Is it your turn to do the dishes?

Here, the first two examples involve precondition (a) and the third example precondition (b).

The rule UNMARKED-ASK is related to a conversational maxim, called the Maxim of Possibility. This says that one should only undertake actions that one expects to be possible, where "possible" includes a number of different factors, in particular that the specific preconditions associated with the action can be satisfied. The relation between rule and maxim is mediated by a conversational strategy, which Brown gives the following formulation:

Strategy 2. If you want to know whether a proposition holds, you can ask someone if it holds. (ibid., p. 154).

There is still a large step between the maxim and the rule, of course. The rule can not be derived from the maxim, the strategy and the notions of action and possibility that Brown works with, but we may say that it is suggested. The rule asserts a direct link between speaking of a precondition and performing the speech act that the precondition refers to, whereas the more general features of the theory only allow a hypothetical inference. Furthermore, given the rule, the task of recognizing an indirect speech act has become less cumbersome, since there are fewer factors to take into account and fewer calculations to perform.

So (12) is interpreted as a direct question about whether a request precondition is satisfied, i.e. whether the addressee can or cannot take responsibility for carrying out the action of closing the door. This analysis is different from many others in its interpretation of *can*, but it is still an analysis in terms of force conversion. Brown does not speak in terms of literal and non-literal meanings, rather she speaks in terms of simple and complex matchings, but it is evident that the first interpretation comes about with no reference to non-linguistic factors. Utterances have two different representations, a surface representation and an internal representation, which are drawn from different vocabularies. The internal representation is the most important as it is also used for all action structures and for the ISA rules. In the surface representation the forms of ISAs are preserved, i.e. in the case of sentence (12) above,

"*Can you close the door?* would have a surface representation that records its interrogative nature and that contains a surface item corresponding to *can*." (ibid., p. 158).

The surface item corresponding to *can* is then linked to an internal item 'can' by a matching process, which is simple since the internal 'can' is supposed to be part of the surface item's internal definition. (Remember that Brown uses quite a general notion of possibility in her theory). The same simple matching process can be used in case of phrases such as *be able to* and *be permitted to* as they also would have the same internal 'can' as the central element of their definitions. It is only if we consider sentences like (13) that matchings may rest on arbitrarily complex inference. The difference between (12) and its counterparts with less idiomatic expressions of ability is thus not explained by Brown, but she says explicitly that that is not what she is aiming at.

Brown's account is more elaborate than Gordon&Lakoff (1975), since a very large number of different ISA forms and patterns are considered. It is also more principled since the proposed rules are linked to general features of action and conversation. Still, it relies on a notion of context-free meaning and hence, just as G&L, finds it more problematic to account for the occurrence of *please* in an idiomatic request such as (12), repeated here for convenience, than to assign a request interpretation to the awkward (15).

(12) Can you close the door (please)?

(15) Are you able to close the door?

Labov&Fanshel (1977), on the basis of a detailed study of conversation in therapeutic sessions, give carefully worded rules for how requests are conveyed (cf. also Labov, 1972). Their rule for Indirect Requests is clearly a rule of force conversion, but it also emphasizes the important part played by the context:

"If A makes to B A Request for Information or an assertion to B about
a. the existential status of an action X to be performed by B

- b. the consequences of performing an action X
 - c. the time T that an action X might be performed by B
 - d. any of the preconditions for a valid request for X as given in the Rule of Requests
- and all other preconditions are in effect, then A is heard as making a valid request of B for the action X.

The preconditions talked about here are as follows:

- 1a. X should be done for a purpose Y
- 1b. B would not do X in the absence of the request
- 2. B has the ability to do X
- 3. B has the obligation to do X, or is willing to do it
- 4. A has the right to tell B to do X,

or, to be more exact, that B believes that A believes that these conditions hold.

What should be noted about L&F's account is that the contextual factors are, so to speak, made part of the signifier. If they are not in effect, the interpretation does not arise. Another thing to be noted is that their Rule of Requests, which accounts for direct requests, beside the preconditions, is couched in terms of "imperatives", i.e. a syntactic feature. To this category they assign not only verbs in the imperative, but also other verbal forms such as *would you mind VP-ing* and *will you VP*. They thus take a rather critical stance to "literalness"; there simply is no literal meaning, only a contextually dependant meaning of the IFIDs. They say (ibid., p. 82):

"In our study of the use of requests in the therapeutic session, it will become increasingly apparent that most of the information needed to interpret actions is already to be found in the structure of shared knowledge and not in the utterances themselves."

Third, the rules of L&F give priority to the hearer. There is no reference to the intentions of the speaker. In fact there is no reference to any actual psychological state of the speaker, only to the hearer's beliefs about the speaker's beliefs.

Apart from the remarks about imperatives, L&F do not provide us with many statements about the meaning of IFIDs. As they give no rules for Assertions and Requests for Information it is difficult to judge how they would treat declarative and interrogative clause-types. On the basis of their examples, however, they treat these constructions as vehicles of assertions and requests for information respectively, apparently with no contextual restrictions. For example, they treat the sentence *Can you grab a dust rag and just dust around?* as a request for information about the hearer's ability (ibid., p. 83).

1.3.3 *The Performative Hypothesis* (Ross, 1970; Sadock, 1974). In this theory the indicator of Illocutionary Force is located in the deep-structure of sentences in the form of an abstract performative verb. Both syntactic and semantic arguments have been given in its favour. However, it has been shown, and to my mind conclusively, that the claims made are untenable (see esp. Gazdar, 1979).

One of the most difficult problems is that sentences of the following type get the same deep-structure, while obviously having different truth-conditions:

- (16) I state to you that the earth is flat.
- (17) The earth is flat.

Apart from this semantic problem the most salient feature of the PH is its incorporation of pertinent factors of contexts-of-utterances in the syntactic structure of sentences. The deep-structure of a sentence is claimed to include a representation of a speaker and a representation of the hearer, as well as a representation of the IF. However, there are many possible relations between speakers, hearers and linguistic messages, e.g. the speaker may be one or many, he may or may not be the source of the message and the hearer may or may not be its final addressee. By building one of all the different possibilities into the deep-structure (and hence meaning) of a sentence the PH loads itself with inconsistencies. The apparent advantages, namely that the theory can account for certain phenomena, such as the occurrence of reflexive pronouns, as in (18), by a uniform syntactic rule, which is "independently needed" to take account of the pronoun in a sentence such as (19), are in comparison not very impressive (examples from Sadock, 1974:22).

- (18) Linguists like myself speak an even number of languages.
- (19) Fritz knows that politicians like himself are outmoded.

Moreover, the syntactic machinery needed to derive surface structures from deep-structures is beyond all formal constraints.

One can only agree with the statement of Allwood (1976: 185) as regards these syntactic claims:

"It seems to me to be a case of misguided ontological purism to believe that all syntactical phenomena have to be explained by other syntactical phenomena. There is nothing incoherent in imagining pragmatic constraints as triggers for syntactic rules."

The Performative Hypothesis therefore seems to be something of a dead end and nothing more will be said about it. However, there is an interesting discussion in Sadock (1974) concerning indirectness which is worth mentioning. In Sadock's view the common formulas used in indirect speech acts are ambiguous. Sadock attempts to draw a line between meaning and use on the basis of co-occurrence properties,

paraphrase properties and grammatical properties. In particular, a linguistic expression can be considered an idiomatic indicator of some IF if the following conditions obtain: (a) it co-occurs with other expressions that are restricted to the illocution in question, (b) paraphrases of parts or the whole of the expression on some assumed alternative interpretation lead to illformedness or non-idiomatic indication, and (c) the expression can not undergo some of the formal manipulations that one would expect to be possible on account of its structure without losing the relevant interpretation, and, conversely, may undergo specific manipulations under the relevant interpretation not being possible under alternative interpretations. As an example, consider the expression *Kan du VP?* which is so common in Swedish requests, (20) being an instance of its use.

- | | |
|---|---|
| (20) Kan du stänga fönstret? | <i>Can you close the window?</i> |
| (21) Kan du stänga fönstret, är du snäll. | <i>Can you close the window, please.</i> |
| (22) @Är du sjuk, är du snäll? | <i>Are you ill, please?</i> |
| (23) Kan du verkligen stänga fönstret? | <i>Can you actually close the window?</i> |
| (24) @Stäng verkligen fönstret! | <i>Close actually the window!</i> |

To start with the co-occurrence properties, the phrase *är du snäll* can only be used in requests, not in ordinary questions. Thus, (21) is only interpretable as a request, not as a question, and (22) is out (except as a rather strange request). *Verkligen*, on the other hand, can be used in nexus-questions and then signals doubt, but cannot be used in requests. Thus, (23) can only be interpreted as a question, not as a request, and (24) is out. This shows that *Kan du VP* may have a request interpretation, or a question interpretation, and that only one of these interpretations need be present.

If we then attempt to paraphrase the expression, we find that it is actually not so easy to do so. The verb *kunna* has no good synonym, but we can find expressions that under the question interpretation may be taken as contextually appropriate alternatives:

- | | |
|---|--|
| (25) Klarar du av att stänga fönstret? | <i>Are you able to close the window?</i> |
| (26) Är du stark nog att stänga fönstret? | - " - |

None of these alternatives support a request interpretation in the same way as *kunna*. On the other hand, if we use a different expression in referring to the addressee, as in (27) or a subordinate interrogative clause (embedded under some appropriate verb) instead of a main interrogative clause-type, we seem to retain a request interpretation.

- (27) Kan Fröken Svensson stänga fönstret?
Can Miss Svensson close the window?

- (28) Jag undrar om du kan stänga fönstret.
I'm asking whether you can close the window

This indicates that the crucial expression is in fact the verb *kunna*. Note that if we delete the *kan* from the subordinate clause of (28), we have a sentence *Jag undrar om du stänger fönstret*, which can be a question or an assertion, but not a request. Unlike the imperative mood, *kunna* requires an explicit reference to the addressee, but the form of this reference is irrelevant. Interrogative clause-type is not even a necessary feature for *kunna* to support an interpretation as a directive, although with a declarative clause-type the directive becomes more of a command than a request.

- (29) Du kan stänga fönstret. *You can close the window.*

The shift from interrogative clause-type to declarative one is one instance of a grammatical manipulation, which does not discriminate between the two interpretations we are concerned with. In both cases a shift of interpretation occurred, which, however, can be explained with reference to the new environment. Other manipulations which both interpretations accept are negation, as in (30), and conjunction, as in (31). Clefting and passive, on the other hand, make a request interpretation impossible, as shown by (32) and (33), but it should be noted that passivization also affects the interpretation of *kunna*; it is not natural to use (33) as a question about the abilities of the addressee.

- (30) Kan du inte stänga fönstret? *Can't you close the window?*
(31) Kan du stänga fönstret och komma hit? *Can you close the window and come here?*

- (32) Är det du som kan stänga fönstret? *Is it you who can close the window?*
(33) Kan fönstret stängas av dig? *Can the window be closed by you?*

But there are also manipulations that make a question interpretation unlikely, e.g. putting the clause in subjunctive form, in particular in a negative, subjunctive form.

- (34) Skulle du (inte) kunna stänga fönstret.
Could you (not) close the window?

The conclusion is, and here I agree with Sadock, that clauses of the form *Kan du VP* are ambiguous. The request sense is as much a possible interpretation of this expression as the question sense and there is no reason to treat them differently in the grammar. The major difference seems to be that the request interpretation must be attributed to the simultaneous occurrence of *kunna* and a subject referring to an addressee, whereas the question interpretation is possible whatever the subject refers

to.

1.3.4 Katz' theory of Performative Propositions. Katz (1977) provides a theory of IF which much emphasizes the distinction between grammar and pragmatics, a distinction which Katz takes to be almost equivalent to the distinction between competence and performance. The idea is that the grammar provides a mapping between sentences and propositions and that different types of proposition have different illocutionary force potential. A major distinction is drawn between Assertive propositions and Performative propositions, the former being linked to most declarative sentences and the latter to declarative sentences containing a performative formula or sentences of other clause-types.

The structure of a proposition is given by a semantic marker. The difference between a performative proposition and an assertive proposition is, roughly, that a performative proposition contains a componential representation of a speech act, a reference to the speaker and a reference to the time-of-utterance, whereas an assertive proposition fails on at least one of these counts. The link between IFIDs and propositional structure is made on a direct basis in the grammar, although details are not spelled out. For Katz, the major differences between different illocutions resides in their purposes. A request is associated with the purpose of getting some person (not necessarily the addressee) to do some action, a question, which is regarded as a kind of request, with the purpose of getting the requestee to produce a possible answer, and a promise with the purpose of assuming responsibility for carrying out some action. In this way Katz differs considerably from ordinary Speech Act Theory as laid down by Austin and Searle.

1.3.5 Common Content Theories of IFIDs. One essential feature of these theories is that the line between meaning and use must be drawn so that illocutionary force comes in the realm of use, not meaning. Of course the problem of assigning correct meanings to the proposed IFIDs still remain, and there have been different proposals (cf. e.g. Allwood, 1976; Ahrenberg, 1978; Bierwisch, 1980; Kiefer, 1981; Hausser, 1980, 1983; Hellberg, 1985). One can say that the different proposals take linguistic meaning seriously in attempting to assign meanings which appear to be unseparable from the form. Thus, they try to maintain some sort of coherence between the meaning of an expression and its interpretation in a particular context. A meaning cannot be overruled or rejected, it can only be made more precise.

Bierwisch (1980) proposes a distinction between utterance meaning and communicative sense. Illocutionary force belongs almost exclusively to the latter. His account of communicative sense is based on the principle that "the communicative sense of all speech acts must be explained in terms of denotation conditions plus the conditions of SI" (ibid., p. 18) where SI is a system of rules governing social interaction.

About the performative formula nothing more needs to be said other than that it is a declarative sentence that specifies a truth condition that can be satisfied by the speech acts in which the sentence is used (ibid., p. 12). Or, "in simple terms: Utterances of explicit performatives describe what they are used to do."

The clause-types are associated with basic cognitive attitudes. These attitudes are part of utterance meanings; in fact, an utterance meaning can be conceived of as a pair of a basic attitude and a 'content'. These attitudes cannot be paraphrased by more explicit expressions, since then they wouldn't be basic, but the general idea is that declarative mood is associated with "taking it that", the imperative with "intending", and the interrogative with "intending to know". In the simplest cases a communicative sense is then derived by means of the following rule:

By uttering a meaningful utterance with utterance meaning $m = \langle att, m' \rangle$ the speaker wants the audience to recognize that he has attitude *att* towards the content m' .

This analysis is then amended somewhat in the case of declaratives as they are said not to be associated with any particular attitude on the semantic level. However, they have a "taking it that"-attitude as their unmarked associated attitude when uttered.

Bierwisch claims that it is not the task of a linguist to develop theories of the system of rules that govern social interaction. In fact, most accounts of this sort say nothing about the relation of their proposed meanings for IFIDs and illocutionary force. The relation between the attitudes he proposes and different illocutionary forces is not spelled out.

An even stricter treatment of IFIDs is given by Hausser (1980, 1983) who analyzes sentence-moods in terms of the ordinary denotational constructs employed by model-theoretic semantics. Hausser (1980) argues for a major distinction to be drawn between denotation-conditions and use-conditions. The use-conditions of a linguistic expression include its denotation-conditions but also other things that mostly can be attributed to special use-markers. The question is then whether clause-type is a use-marker or not. In Hausser's view it is not; first of all, because of the lack of correspondence between form and function, and secondly, because Hausser adheres to a notion of strict surface compositionality, which says that nothing lacking a concrete manifestation in the syntactic surface of the sentence can be included in its semantic representation.

Hausser's analysis of declarative sentences is the ordinary one, i.e. they denote propositions. Imperatives denote properties of individuals and interrogatives denote sets of possible answers. This description holds also for yes/no-interrogatives with the possible answers *yes* and *no*. Performative sentences are treated as ordinary declaratives in the semantics. In the table below the results of Hausser's analysis for a few simple sentences are shown.

SENTENCE	TYPE	TRANSLATION (in Intensional Logic)
John sleeps.	<t>	$\text{^sleep}'(j')$
Sleep!	<e, t>	$\text{^}\lambda x[\text{YOU}\{x\}) \wedge \text{sleep}'(x)]$
Who sleeps?	<T, t>	$\text{^}\lambda P[P\{\text{^sleep}\}]$
Does J. sleep?	<<t, t>, t>	$\text{^}\lambda r[r(\text{^sleep}'(j')) \wedge [(r=\lambda p(\text{^}p) \vee r=\lambda p(\text{^}\sim p))]]$

As can be seen an imperative and an interrogative have very similar types of denotation. The meaning of the imperative, however, contains a variable, YOU, standing for the contextual property of being the addressee.⁴ Thus, the denotation of an imperative sentence is the property of being the addressee *and* having the property explicitly mentioned in the sentence.

Hausser (1983) gives some indication of how his account of literal meanings can be embedded within a pragmatic theory, in the form of an outline of a "speaker simulation device". He is also anxious to stress that his analysis of syntactic mood is compatible with different uses of it, e.g. imperatives are not restricted to commands. In my view Hausser has by his choice of mood denotations succeeded in relating linguistic expressions to some (but not all) of the essential factors of assertions, directives and questions, respectively, but his remarks do not reach the level of detail where meaning can actually be related to use.

An advantage of a "common content theory" is that its description is usually correct, as far as it goes, for a large number of cases. A definite disadvantage, however, is that it does not account for the simple observation that sentences of the major sentence types are so easily classed in illocutionary terms: statement, question, exclamative and so on. Of course, the strong bond between form and function assumed by traditional grammar may be totally wrong, but if an ordinary person is faced with sentences such as those in (35), he or she recognizes them without hesitation as questions, not as, say, functions from x-denotations to propositions, expressions of intents to know, or open propositions. Unless we can account for this intuition, it seems to me that we have a poor theory.

⁴ The variable name actually employed by Hausser is different, but with the same intended interpretation.

- (35)a. How much are the carrots?
- b. Is there any food left?
- c. Who were you talking to?

1.4 An Evaluation.

One aim of this thesis is to provide a general answer to the problem: What properties of an utterance make it a question? This is only one specific case of the more general problem: For any illocution, I, what properties of an utterance make it an I? The different theories of illocutions we have looked at in this chapter have suggested the following answers:

I. Speech Act Theory as developed by Searle:

- 1(a) The expression used contains a specific IFID and is uttered in a context where the felicity conditions of I obtain, or
- 1(b) The utterance makes reference to a felicity condition of I under some appropriate literal force I', and the felicity conditions of I obtain. In its reference to a felicity condition the utterance may or may not contain an indicator of indirect force.

II. Illocutions as signifiers.

- 2(a) The utterance is I on account of its literal meaning, or
- 2(b) The utterance is I on account of its literal meaning, L, where L makes reference to some precondition of I, and a rule of indirect signification, which links L to I as a matter of convention, and the preconditions of I are in effect.

For Labov&Fanshel (1977) we should probably also add to case (2a) that the preconditions of I must be in effect.

III. The Performative Hypothesis.

- 3(a) The utterance is I on account of the abstract verb occurring in the highest clause of its deep-structure, or
- 3(b) on account of an unspecified pragmatic theory.

IV. Katz' Theory of Illocutions.

- 4(a) The utterance is I on account of its propositional type, which is determined by the grammar, or
- 4(b) on account of an unspecified pragmatic theory.

V. *Common Content Theories.*

5(a) The utterance is I on account of the denotation conditions of the linguistic expression used *and* contextual (pragmatic) factors.

The interaction between linguistic and contextual factors is not accounted for, however, as illocutionary force is considered to be outside the realm of semantic theory.

These different accounts can be seen to differ in the following respects:

- (a) how the meaning of the relevant linguistic expressions (the IFID's) is conceived;
- (b) what importance is laid on idiomatic vs. non-idiomatic forms of expression;
- (c) how and at what point context is allowed to play a role;
- (d) whether there are specific rules that relate illocutionary force to literal utterance meanings, or whether there are only general principles of inference in conversation at work.

All accounts subscribe to some version of literal meaning. The more comprehensive this literal meaning is regarded, the more prone it is to counterexamples. For example, the sentences listed above under 1.2.1 all speak against an account of the meaning of the interrogative clause in terms of literal force as a question. Equally paradoxical is a sentence such as (10) of 1.3.2. On the other hand, if the meaning is less specific we have no immediate account of why sentences are so commonly categorized in illocutionary terms as statements, questions, requests and so on. What we should want to say is something in the following vein: an IFID may suggest a certain illocutionary interpretation even in an underspecified context, but in a more specified context it may be interpreted differently. Therefore, IFIDs can never be the sole determinants of illocutionary force. Co-textual and other contextual factors always play a role and if the context is underspecified it will have to be supplied by the interpreter in the process of interpretation.

If the meaning of an IFID must be compatible with a number of different illocutionary interpretations, it cannot be equal to any one of them. In particular, there can be no literal force. We may view a meaning as a use potential, which however must be filled in and modified in the interpretative process. One way in which this would be possible is if the meaning is an object of comparison, a prototype (cf. Bobrow&Winograd, 1977). Interpretation thus becomes, to a large extent, comparison. In one context certain potentials are disregarded and others focused upon, whereas in another context the situation may be the reverse.

Moreover, we must recognize that IFIDs, just as other linguistic expressions, are very often ambiguous. Even if two uses can be shown to have certain common properties it is not necessary that they should be treated as variants of the same meaning. The line between cases of different meanings and cases of different interpretations of the same meaning is of course not so easy to draw, but my suggestion is that we should not be

too reductionist. If an expression is known to have an established use with certain regular effects in a context with certain definite features I think we can regard that use as a meaning, i.e. as a property of the expression to be separated in the grammar from its other properties. Thus, I take it that the use of the verb *kunna* (can) in directives should be regarded as a property of that verb which may be related to, but nevertheless is different from, its other semantic/pragmatic properties.

What I have said so far about the meaning of IFIDs applies in equal measure to the meaning of other expressions too. Then it may be asked in what ways, if any, IFIDs differ from other expressions. The answer can only be that the class of IFIDs is not a particular subset of the semantic primitives of a language, but that the choice of expressions (or features) within certain paradigms of a language, such as clause-type, has more profound effects on the illocutionary interpretation of utterances than do choices within other paradigms.

One important property of an interpretation is that it is *coherent*. Coherence is necessary both externally and internally. External coherence of an interpretation means that it is coherent with the interpretation of the context. Internal coherence means that the interpretation of the whole expression is coherent with the interpretations of the parts of an expression. Another important property of interpretations is *justification*, which again can be both external and internal. Internal justification means that the interpretation of an ultimate expression is in accordance with an established use of that expression. Internal coherence and internal justification is, I believe, the most we can make out of the Fregean principle.

As for the second difference some of the above accounts, notably Speech Act Theory itself and Sadock (1974), have paid due attention to the existence of speech act idioms. Within Speech Act Theory they constitute a very special type of expression, probably because illocutionary force is regarded as a very special type of content. They cannot be assigned ordinary literal meanings as their impact can in principle be calculated or inferred according to general rules and yet their "indirect force" is so transparent. This has led to the creation of linguistic categories such as "Indicators of Indirect Illocutionary Force" (van der Auwera, 1980) or "Short-circuited implicatures" (Morgan, 1978). For Sadock the speech act idioms are genuinely ambiguous according to his criteria for distinguishing between use and meaning and so he attempts to derive them from more than one deep-structure. As illustrated above I find his criteria for distinguishing linguistic meaning from pragmatic inference useful. Although I do not use his grammatical framework I must agree with him in assigning speech act idioms the same status as ordinary idioms.

As for the third difference, it has two aspects. First, whether or not meaning can be regarded as completely context-free and, second, at which point semantic equivalence has to yield to inference. As for the first point Katz (1977) and adherents of the Performative Hypothesis are proponents of a context-free notion of meaning, whereas e.g. Searle (1979b) has stressed that the semantics of natural language is underpinned

by a host of assumptions that reflect the human outlook on the universe. Yet both views hold that a grammar is a context-free device that operate autonomously and that pragmatic inference needs a sentence-meaning as one of its inputs. Contrary to this, Labov&Fanshel (1977) seem to hold that the interpretation of context must be allowed to interfere in the interpretation of a linguistic expression (The Rule of Requests). In the next chapter we will argue that this must be the case also for the interpretation of interrogative structures as questions, but here I will offer some general support for this view.

It is by now commonplace to say that context has a strong influence on the interpretation of utterances in conversations. Expectations on participants due to their role in the conversation and rules of conversational organization determine interpretations (Schegloff, 1976; Levinson, 1979, 1983; Goffman, 1981b). As an example, consider the following (overheard) excerpt from a quiz program.

(14)

P1: Ja, nu är det dags för vår lilla frågelek.

A1: Mm, elva.

P2: Du tar elva.

A2: Ja.

P1: *Well, now it's time for our little quiz.*

A1: *Mm, eleven.*

P2: *You want eleven.* (lit. You take eleven.)

A2: *Yes.*

To understand A1 we must know the rules of the quiz, namely that P has a file of questions numbered from one to fifty and that the contestant has to pick one of them by its number. The utterance is thus interpreted as a decision by the contestant which question P should put to her. The second utterance by P can be taken as an acknowledgement of this information and as a request for confirmation (and perhaps explanation).

In this case it is fairly obvious that it is the knowledge of the context that is responsible for those parts of the resulting interpretation that go beyond the value of the chosen number. This knowledge is of the kind that seems fit to be represented by a frame (Minsky, 1975), as choice of number is an obligatory action on the contestant's part in this activity. However, at least on the face of it, there is nothing here that threatens a neat distinction between meaning and use, since *elva* after all means '11'. But things are not as easy as this. *Elva* is a polysemous word in Swedish. First of all, as any other number it may be interpreted either as an ordinal number (which is the relevant interpretation here) or as a whole number, answering the question 'how many?'. Also, as other small numbers, it may stand for its graphical image of two ones standing next to each other. Furthermore, it may stand for a time of the day 'one hour

before noon' or 'one hour before midnight', and for a team of footballers. We may consider these last meanings as derivative, or perhaps even as uses of the other meanings, but there is nevertheless a problem of disambiguation.

If we turn to P's second remark, *Du tar elva*, which corresponds to something which A might have said, namely *Jag tar elva*, (I want eleven), there is a problem also with the word *ta* (take). What is the meaning of this word? If we consider as a candidate for its literal meaning the most concrete one in which 'taking' involves an action where one takes a material object with one's hand, it is obviously not relevant here. If a metaphor is involved, it is certainly conventionalized to the point of being dead.

Instead of *ta* P might have used another word. He might have said any of the following with no difference in interpretation in the context:

- | | |
|-----------------------------|----------------------------------|
| -Du väljer elva. | <i>You choose eleven.</i> |
| -Du bestämmer dig för elva. | <i>You've decided on eleven.</i> |
| -Du vill ha elva. | <i>You want eleven.</i> |

There are other partial synonyms to Swedish *ta* (take), however, which could substitute for it in other contexts, although not here:

- | | |
|---------------------|-----------------------------|
| -@Du fångar elva. | @ <i>You catch eleven.</i> |
| -@Du påverkar elva. | @ <i>You affect eleven.</i> |
| -@Du träffar elva. | @ <i>You hit eleven.</i> |

It could be claimed that a word like *ta* is semantically uniform, i.e. that intensionally it has one meaning, although that meaning is exposed in a vast number of concrete uses (see e.g. Ruhl, 1974). Be this at it may, whatever that meaning is it will not determine the interpretation of a token in a given context. The interpretation of *ta* is here as contextually determined as that of *elva*. The context allows for one basic relationship between contestants and numbers at this particular point, namely that of choice. Therefore it is sufficient for A just to mention the number, without giving an indication of the relationship. However, if such an indication is given, it may be given by several different verbs that imply choice.

If we look at the combination *ta elva*, 'take eleven', as a linguistic expression, it may be interpreted in many different ways. Here are some of the possibilities:

choose (candidate, room, entrance, ...) No. 11,
choose eleven (pieces of something),
choose eleven o'clock,
eat eleven (pills),
carry eleven (pieces of something),
take eleven photographs,
bring eleven (pieces of something),
"take" (something, in some sense) at eleven o'clock.

This list can easily be extended further. The point is that of these potential interpretations only one is present in the dialogue we looked at. If all of these are possible meanings that are determined by the grammar and made available when we interpret the utterance, we are up against a terrible decision problem. If we embed our two-word expression in a larger construction, the number of possible meanings will soon be counted in hundreds, not to say thousands, which makes things even worse. Of these possible meanings all but one or two are irrelevant and useless. I think it follows that context must be allowed to play a role at all stages of interpretation, also at the level of words and phrases. At this level, of course, context refers to both situational context and co-text, but the conclusion is nevertheless the same: sentence-meaning is a superfluous notion to a theory of utterance-meaning; the only meanings that are undetachable are the meanings associated with the linguistic primitives: formatives and minimal constructions.

It is possible that one can make sense of a context-sensitive notion of literal meaning. However, literalness is a matter of interpretation, not meaning; it means that the meaning is used as a fixed standard, not as a prototypical object of comparison.

The fourth difference we stated concerns the role of specific indirect speech act rules, as opposed to general interpretative strategies. In my view, the distinction between direct and indirect speech acts becomes superfluous if we look at illocutionary categorization as no different from categorization in general. An utterance can be counted as an instance of a particular illocution if it has the prototypical features (of which many are non-linguistic, of course) of that illocution. If it simultaneously has the features of some other, though compatible, illocutionary type, this does not impose any particular problem.

Many utterances that have been analyzed under the rubric of Indirect Speech Act, in particular indirect requests, can be seen to be constructed specifically to meet conflicting demands; on the one hand the need of making the addressee understand what one wants, and on the other hand the need not to keep a social balance, in particular, the need not to impose. (cf. Brown&Levinson, 1978, for a detailed model along these lines). Many such utterances employ constructions and lexical items that have this double function as one of their established meanings, whereas other utterances can be seen to conform to particular strategies, e.g. the use of pre-acts (Levinson, 1983) that give an indication of what is going to follow:

Pre-invitation:	What are you doing tonight?
Pre-announcement:	Have you heard what happened to Charlie?
Pre-offer:	Are you hungry?
Pre-request:	Have you got a cigarette?

The act signalled by the pre-act is usually transparent as to its type, but not always as to its details. But if the details are transparent, whether explicitly or implicitly, I see no reason why the utterance should not be called by a name appropriate of the act, especially as the addressee usually acts in accordance with such a classification. For instance, a transparent pre-request, such as the one above, is just as much a request.

Levinson argues (*ibid.*, pp. 356f.) that the existence of such pre-acts, and the sequential structure of dialogue moves they give rise to, goes a long way in explaining Indirect Speech Acts. I will return to his argument in chapter 6. For the moment I only note that specific rules for indirect speech acts (and multiple purpose utterances generally) are unnecessary, when we allow for ambiguous or, should we say, negotiable interpretations of utterances. This requires, of course, that we do not assign the sentences that are the vehicles of these multiple function utterances single, undetachable, literal meanings.

2. WHAT IS A QUESTION?

2.1 Terminology.

The noun *question* has a characteristic threefold polysemy, which it shares with nouns such as *answer* or *assertion*. It may refer (i) to a communicative act, (ii) to a kind of conceptual object: a problem or issue of some sort, or (iii) to a means of expression of a question in either of these two senses. I will use the word *question* in both of the first two senses, while using the term *question vehicle* for the third. An *interrogative structure* can then be described as a type of expression that is conventionally used as a question vehicle.

It is the purpose of this chapter to give a proper characterization of questions, both as communicative acts and as conceptual objects.

2.2 The Question as Communicative Act.

2.2.1 *Questions, Sentences and Turns*. The vehicle of a question may be a sentence comprising a single turn in a conversation, as utterance A1 of (1).

(1)

A1: Är du hemma till åtta?

Will you be home by eight?

B1: Nej, jag har ett möte ikväll.

No, I have a meeting tonight.

A2: Hur länge då?

For how long?

This simple correspondence between questions, sentences and turns is not always at hand. The question vehicle may be something smaller than a sentence, as A2 of (1), or it may consist of several sentences. Conversely, a single sentence may express more than one question, as A1 in (2). It is not an easy task to quantify communicative acts, so one may dispute whether A's first utterance in (2) actually conveys one or two questions. It is clear though that essentially the same exchange of information can be achieved by either more turns and sentences or less turns and sentences. (3a) illustrates the first case and (3b) the second case.

(2)

A1: Är ni hemma till åtta?

Will you be home by eight?

B1: Ja.

Yes

C1: Inte jag, jag har ett möte ikväll.

Not me, I have a meeting tonight.

(3a)

A1: (till B) Är du hemma till åtta?

Will you be home by eight?

B1: Ja.

Yes.

A2: (till C) Och du?

And what about you?

C1: Nej, jag har ett möte ikväll.

No, I have a meeting tonight.

(3b)

A1: Är ni hemma till åtta?

Will you be home by eight?

B1: Inte C men jag.

C won't be, but I will.

Yet, the situation may be more complicated than this. It is possible to succeed in asking a question without using any interrogative structure. Consider (4), an authentic example, where the question vehicle furthermore comprises more than one turn.¹

(4)

A1: ja, å jag ville fråga om fåglar

P1: ja?

A2: jag såg häromdan, det var underliga fåglar, som va bra lika fiskmåsar, men dom var mycket smärtare å vingarna var liksom krökta, å så var det svart under vingarna utåt kanterna, å ja, det var sju stycken

P2: var tilldrog sig detta nu?, var det hemma hos=

A3: =det tilldrog sig i Östra Småland i Tuna socken

P3: jaha

A4: å dom där, dom hade liksom, det såg ut som dom hade roligt för dom..., en han hade riktigt elegant uppvisning

P4: nu ligger många pannor i djupa veck här kan jag berätta för Tage

A1: *Well, I wanted to ask something about birds*

P1: *Yes?*

A2: *I saw the other day, there were these strange birds, that looked just like sea gulls, but they were much slimmer and the wings were kind of bent, and then they were black under the wings near the edges, and, well, there were seven of them*

P2: *Where was this now? Was it near your home=*

A3: *=It was in eastern Småland, Tuna district*

P3: *I see*

¹ From *Naturvåktarna* (Swedish Radio, May, 1980). In this program a panel of experts, lead by the compère, P, answer questions from the listeners about flora and fauna. A is a calling listener.

A4: And they, it looked as they were having fun, because..., one of them, he made quite an elegant performance

P4: Now, we have knitted our brows here, I can tell you

In this case we even have problems in delimiting the question vehicle. A1 marks the beginning of it, but it is not so easy to say where it ends. Probably different listeners understand what is being asked about at different moments. By P4 the addressee signals to A that he (and his fellow members of the panel) has understood the question; the knitting of brows he reports is definitely related to the problem of what birds A has seen, not to any difficulties in comprehension.

From this I conclude that there is a definite need to keep structural units such as turns and sentences distinct from functional units such as questions. The vehicle of a question may be long or short and may span more or less than one turn. Furthermore, as demonstrated elsewhere (see 1.2.1), the vehicle of a question may not only be the vehicle of a question, but have some other function as well.

2.2.2 *Questions, Moves and Exchanges.* Conversation has been described as having a primarily hierarchical structure (Sinclair&Coulthard, 1975; Stenström, 1984). This view is probably much too simplistic (see e.g. Levinson, 1981 for a critique), but the multi-layered structure of conversation must be recognized. A communicative unit has relations in many different "directions": upwards as part of a more complex unit, downwards as a unit having parts and sideways to units of the same layer. As conversation is an activity which develops in time we need to distinguish two sideways directions: backwards to the preceding units and forwards to the units that follow, or are expected to follow. Given that a communicative act occurs against a background of possibilities, we must also recognize their paradigmatic relations, i.e. relations to the acts that could have occurred, but did not.

The most characteristic relation of a question is its forward relation to an answer. This relation has in fact often been taken as a defining criterion of questions. One way to express it is to say that a question makes an answer *conditionally relevant* (Schegloff, 1972: 363ff). This does not mean that an answer necessarily follows a question, but that the absence of an answer is conspicuous and needs to be accounted for by the one who is expected to provide it.

In conversational analysis as pioneered by Sacks and Schegloff the relation between question and answer is regarded as a structural relation. Together they form what is called an *adjacency pair*, where the question is referred to as the first part of the pair and the answer as the second part (Schegloff&Sacks, 1973; Coulthard, 1977). As originally described the notion of adjacency pair was clearly meant to apply to contiguous sentential moves of a conversation, but generally the conditional relevance of an answer upon a question is not so restricted. This is not only due to so called *insertion sequences* (Schegloff, 1972) and other possible intervening moves, but also to

the fact that answers, just like questions, may be structurally complex. For instance, the conversation from which (4) is taken continues with a long discussion in which most moves can be taken as contributions to an answer of the question raised. Therefore, it will not do to treat questions and answers as moves that have a definite position within some structural unit of conversation, such as the pair or the exchange.

Different schemes have been proposed for the analysis of discourse. The units proposed in these schemes differ in size or, what Sinclair et al. (1972) call *rank*. What is claimed here is not that such schemes are irrelevant to the analysis of discourse, only that questions (and answers) can not be regarded as units of one particular rank. Questions in discourse may be subordinate, i.e. of the smallest rank, they may correspond to moves in the sense of Sinclair et al., but they may also be superordinate, perhaps resulting in hours of discussion and being in force all along.

2.2.3 Questions and Activities. Questions are prominent in many social activities, such as lessons, examinations, interrogations, trials, interviews and quiz shows. They are of course also frequent in ordinary everyday conversations. If one looks closer at these different *activity types* (Levinson, 1979), one will find that questions do not function in the same way from one activity to another, i.e. their point, or purpose, shows a lot of variation. This variation is correlated with the different constraints on information, the different standards of appropriateness that hold in the activities. The purpose of this section is to demonstrate the range of this variation and the way in which the function of a question depends on the activity.

2.2.3.1 Activities initiated by someone in need of information. These activities may vary considerably in formality, setting etc., but have as a characteristic trait that one actor initiates a talk to get information which he does not possess from the addressee. The essential constraint on information is that it be true, or at least given in good faith. As illustrations, consider the following three cases:

- (a) *Asking for information of immediate need.* The person addressed may be someone you are already talking to, someone at an information desk or a stranger in the street, as when you stop to ask the way.
- (b) *A job interview.* In this case both parties are anxious to get information, but we may regard it as the employer's initiative to call someone to a job interview. The questions asked will concern the abilities and experience of the applicant, as well as his reasons for applying for this particular post.
- (c) *Opinion polls.* Opinion polls are peculiar in that the information asked for is not the information being sought. The questions put to the selected addressees have no intrinsic interest, nor have the answers. They have significance only as items in a collection of data from which information of real interest can be gathered. In so far as the answers can be objectively true truth is not of primary importance. More

important is that the answers agree with the true beliefs and opinions of the addressees.

In all of these cases we can say that the questions basically function as epistemic requests (Åkqvist, 1972), i.e. as requests to get to know something. This is perhaps not true of all questions in a job interview, where the employer already knows something about the applicant and may be more interested in the information that is indicated as opposed to being signalled (Allwood, 1976:66, 107f).

2.2.3.2 Lessons. The purpose of a lesson, at least from the teacher's point of view, is to impart information to the pupils, get them to learn skills or facts about the world. To achieve this purpose the teacher employs a number of different techniques, of which asking questions is one. The teacher's questions may serve different functions, e.g., to train the pupil in some skill or check that she has mastered various aspects of it:

(5)

T: How do you spell Ann?

J: A, N, N.

T: A, N, N. What kind of an A?

J: Capital.

T: Why is it capital?

J: Cause it's a name.

T: Of a?

J: Girl.

/from Levinson, *ibid.*, p. 384; originally
from Gumperz & Herasimchuk (1975)/

T: OK.

Questions also have the function of involving the pupils in the lesson. They serve a pedagogical purpose in letting the pupils answer questions instead of the teacher providing the relevant facts in the form of a lecture. First, the teacher can check what the pupils already know and, second, she can focus their attention to the very thing she wants them to learn.

(6)

T: What about this one? This I think is a super one.

Isobel, can you think what it means?

P: Does it mean there's been an accident further
along the road?

/from Coulthard, 1977: 112/

2.2.3.3 Examinations. The purpose of an examination is to estimate what a candidate knows on some particular subject and the questions asked are directly geared to that purpose. Answers should be true (or at least correct according to the standards of the institution that performs the examination), but also informative enough and generated by the candidate without help from outside, otherwise they will be discounted.

Typical of examinations, as well as lessons, are the fixed roles of the actors. There is one actor who determines which questions can be asked and what the correct answers are, whereas the other actors have to conform to the rules that are set up by the former.

2.2.3.4 *Quiz shows*. There are quiz shows of many different kinds and of different degrees of seriousness. A common feature, though, is that they should be entertaining and that there is something to be gained from a correct answer, if only a point. Demands on answers may vary; truth and informativeness may be important, but so may wittiness and imagination. Questions should be entertaining and interesting, apart from providing the problems that contestants should solve. Typical of quiz shows are the fixed roles of the actors. It should be noted that in contrast to lessons, the questioner is not always an expert on the topics raised.

2.2.3.5 *Planning and decision making*. Plans and decisions may be trivial or important, individual or collective, and so occur in many different settings. When an individual plans his actions for a day there may be no verbalizations at all, but when a body of people is to take a decision, it may be preceded by long discussions. The function of a question in these cases is to pose the problem to which the plan is a solution, or to state the issue which must be decided. Questions of this kind have been called *deliberative* and I will use that term for them from now on. Examples are "What shall we do?", or, on an agenda, "Next meeting". Constraints on the answers are not that they be true, but that they be adequate in relation to a purpose and possible to implement.

2.2.3.6 *Argumentation*. An argumentation can be seen as a kind of game which, as other games, can be won. In cooperative argumentations the outcome may be agreement, but often an argumentation takes place between opponents who want to defeat each other by winning the argument. A typical function of questions in arguments is to force the other party to agree with your own view, or to something that in the end will turn out to entail just that. These questions often have a didactic character and border on the rhetorical. An illustration is given by the last utterance of the dialogue (7).

(7)

A: I have no money.

B: Why, you got your salary last week.

A: I lent 50 to Jim.

B: To Jim? How on earth can you lend money to Jim!?

A: You know he is out of a job and has a family to support.

B: Of course I know, that's why I'm asking.

A: Shouldn't one help a friend in need?

As in the example the information asked for often relates to some norm of society (Goody, 1978a).

2.2.3.7 *Social talk*. By social talk I mean such communication that primarily has the function of establishing or reinforcing social relations between the actors, or which seek to engage other participants in social activities. Questions are quite common in social talk, with varied interpretations. Four examples:

(a) *Greetings*. Not all greetings are questions, but many are. For example, it is common to inquire about the other party's well-being or health as part of a greeting ceremony. These questions are of course often conventionalized to the point of being pure greeting formulas, which have equally conventionalized answers, but they can nevertheless still be recognized as questions.

(b) *Talk initiators*. If you feel like talking to a stranger while waiting on the bus or sun-bathing in a park, an agreement-seeking question normally does the job. You may say: "Nice day, isn't it?" or "Is that a collie?", and thereby start a conversation. Demands on answers are that they be agreeable and non-committing, but informative enough to provide the possibility of introducing new topics. To both of the questions above short answers such as *yes* and *no* would sound rejective.

(c) *Joking questions*. It is not so easy to say why we joke, but it seems in any case to have more to do with social relations than with truthful representation of reality. To laugh at the same thing creates a bond between actors. Questions may occur when you make a joke, as in (9) (from Goody, *ibid.*, p. 28), where it is perfectly clear that B has no duty to provide A with food, but they may also be part of ready-made jokes that are told by one person to another. The nature of the question may then reveal it as part of a joke, but it may also just create the possibility of a pun, as in (10).

(9)

A: Where is my soup, then?

B: Senior men don't eat in the courtyard!

(10)²

P: Can you repair a frayed knot?

Q: Afraid not.

P: Yes.

(d) *Exclamative agreement seeking*. Talk initiators usually seek agreement, but safely, i.e. about matters that anyone can agree on. But there are other agreement seekers that relate to matters that one is emotionally involved in and that others may have a different opinion about. Such acts are normally ingroup acts, between friends, colleagues, lovers or family members. Two examples:

(11) He's so MEAN, isn't he?

(12) Isn't that absolutely FANTASTIC?

2

From the cartoon B.C.

Typical of these acts is that you both express an attitude or feeling and invite the addressee to share it with you. Tag questions are common vehicles of such acts. Unlike requests for confirmation you are probably not willing to accept the opinion of the addressee, if he happens to disagree.

2.2.3.8 *Indirect requests.* Interrogative structures are often the vehicles of requests, such requests then being called indirect (cf. the discussion in chapter 1). In some of the more conventionalized cases it would be odd to interpret such utterances as questions, but in many cases both a question interpretation and a request interpretation are simultaneously present, as in the examples below:

- (13)a. Have you got a match?
- (13)b. Can I talk to you for a minute?
- (13)c. You are not playing with the records, are you, darling?

It is clear, however, that the situations in which such utterances are used are request situations. The primary interest of the speaker is to get the addressee to do something, or refrain from doing something. The purpose of allowing a question interpretation in such a situation, rather than a straight imperative or an assertion, is that it gives the addressee the opportunity to refuse (or comply, as with (13c)), without losing face in front of the speaker (cf. below 6.4.3.3).

2.2.3.9 *Conclusions.* This list is far from being complete, but it shows with all necessary force that questions function in their respective social settings in many different ways. I wish to stress that the examples we have considered are not odd kinds of questions, they are common and natural instances of their kind. It follows that we will not find the unity of questions in the purposes they fulfil, whether we regard the purpose as a goal for an individual speaker or as the point of a social activity.

2.2.4 *Illocutionary Effects.* So far I have only stated what a question is not. It is now time to look for a basis of a characterization in positive terms.

Austin (1976: IX) noted that illocutionary acts produce certain effects, something which "is not to say that the illocutionary act is the achieving of a certain effect", as he carefully stressed (*ibid.*, p. 116). Austin classified illocutionary effects under three headings: uptake, taking effect, and the invitation of a response or sequel. Now, illocutionary acts do not differ in the way uptake is secured; that the addressee hears what is being said, that he knows the language used, that he has some awareness of the setting and that he is cooperating according to some minimal standard are necessary preconditions for all illocutions and so can not be the basis of a characterization of individual types. Illocutionary acts do differ, however, in the way they take effect and in the responses and sequels they invite. What I propose to do, then, is to take illocutionary effects as a basis for the characterization of questions and

their nearest contrasts: assertions and directives (cf. Wunderlich, 1976).

In characterizing illocutionary acts in terms of how they take effect, it is important that we distinguish those effects that are tied to the act as an instance of that particular illocution from those that are generally true of any illocutionary act. For example, any illocutionary act brings with it an opportunity for the addressee to accept or reject it as a valid contribution to the ongoing activity. A possible response is thus that the addressee objects to the act on a meta-level or acknowledges it as valid by providing a feedback of some sort. Effects of this sort need not be stated in the definitions of individual illocutionary types.

The effects of an illocutionary act must also be seen in the light of what it is possible to achieve. Questions, assertions and the like belong to what may be called *informative* activities. A characteristic feature of such interactions is that they are centered around topics, i.e. areas of interest that the participants of the interaction give (or want) information on. A possible effect of an utterance of an informative activity is that it introduces a new topic; alternatively it could bring one to a close. Another type of effect concerns the way a speaker relates himself to a topic; basically, he may give information on it or he may fail to do so. In the first case we may say that the speaker assumes the role of an informer, the A-role, and in the second case that he relinquishes that role.³ A third type of effect concerns the way in which the speaker relates a topic to the addressee. For example, he may pass on the A-role to the addressee, or he may keep it for himself.

All of these effects are local effects on the state of a verbal interaction, pertaining to such factors as topics and action potential. Although usually being intended, it should be noted that they may be brought about unwillingly, if the speaker's communicative behaviour can be so interpreted. Illocutionary effects are obviously correlated with goals and perlocutionary effects, but cannot be equated with any of them. Rather, they relate to the latter as means to an end, or as structure to function.

In spite of being local, illocutionary effects are nevertheless sufficiently varied to be distinctive of different illocutionary types. For example, the difference between questions and assertions can basically be described as follows: with a question a speaker introduces a topic but does not give information on it; with an assertion the speaker does both actions at the same time.

2.2.5 How Questions Take Effect (Version 1). Given that uptake is secured, the fact that a speaker, S, has asked an addressee, R, a question entails that the following effects have been produced:

³ The 'A' may be associated with the adjective *assertive* or with the notions of A- and B-events (Labov&Fanshel, 1977).

(14)

- i. S has introduced a topic, T;
- ii. S has not given information on T;
- iii. (a) R has been given the task to search for information on T,
and (typically) (b) the task to provide S with that information.

The last clause, (iiib), has been marked as non-necessary. This means that there are questions which do not have that effect. For example, it is possible to impart information by asking a question, as in (15):

(15)

- A: Who was calling?
- B: Who usually calls at this time of the evening?
- A: Oh, I see.

Also, it is not necessary that the addressee is assigned the role of next speaker. Still I think this clause must be part of a proper characterization of questions as it expresses an unmarked case, an effect that is prevented only in special circumstances. The other clauses I take to express necessary effects, at least as necessary as anything can be in a prototype characterization.

Another thing is the relation of (iiia) to the first two clauses. If a speaker introduces a topic without giving information on it, could it not be taken for granted that the addressee should search for information on it? I do not think this is necessary, since it is possible to relate to a topic without informing on it. A comment such as *That is a good question* is an example. Cases where such a comment, rather than proper information, is actually sought are of course rare, but nevertheless possible. Hence, illocutionary acts satisfying properties (i) and (ii) only are not necessarily questions.

Lyons (1977: 755) has suggested that we must distinguish two types of questions as communicative acts. There is, according to him, a difference between asking a question and merely posing it. For the latter type no answers need be given; in Lyons view they are used to externalize the doubt of the speaker. The definition above applies to both kinds of questions. For a posed question clause (iiib) does not hold.

2.2.6 The Illocutionary Effects of Assertions and Directives. An assertion basically takes effect by providing information on some topic. Given that uptake is secured, the fact that a speaker, S, tells an addressee, R, something, then entails that the following effects have occurred:

(16)

- i. S has introduced, or started out from, a topic, T;
- ii. S has given some information, I, on T;
- iii. S has indicated R as the receiver of that information.

Directives encompass a number of different illocutionary acts such as requests, commands, orders and entreaties, which take effect in different ways, but they have certain things in common which make them different from both questions and assertions. They are like assertions in specifying information on an assumed topic, but unlike assertions in the standard of appropriateness on specifications and in the fact that the topic is restricted to concern the behaviour of the addressee. On the other hand they are like questions in setting a frame for the addressee's behaviour. Thus, the effects of directives can be stated as follows:

(17)

- i. S has introduced, or started out from, a topic relating to R's (future) behaviour;
- ii. S has specified some behaviour, B;
- iii. (a) S has given R the task (minimally) to consider behaving in accordance with B, and (possibly) (b) the task of behaving in accordance with B.

The topic of a directive is one which is clearly specified as to the identity or kind of the actor. But it may be restricted further, e.g., by specific times, purposes or conditioning events.

Just as for questions I have distinguished between a mental and an outward sequel for the directive. In both cases it is true that an outward positive response requires some mental considerations, and in both cases it is possible that the effect may stop at the mental considerations, though for different reasons. In the case of directives it is possible to tell someone what to do only if you have the right to do so, whereas in the case of questions, the contextual factors determining whether an overt answer should be provided or not, have more to do with participants' knowledge and the need for information.

We can observe that the typical effects of directives are compatible with the typical effects of questions. Thus a directive which specifies that A should answer a question can also be interpreted as a question, since a topic is given and S has indicated to A (by explicitly telling him) that an answer should be produced. (18) is a common request for information and (19) is typical for an examination question.

(18) Tell me what happened.

(19) Explain how a combustion engine works.

However, it does not follow that questions can generally be treated as requests to tell. First of all because the compatibility of interpretations is contextually dependent and, second, because an explicit request to tell takes effect in a slightly different way from

questions asked by means of interrogative structures. A request to tell brings the telling into focus, whereas a question brings the topic into focus. (20) thus differs from (21) in that a *No* will be ambiguous between an answer to the question and a refusal to tell, whereas in (21) it can only be an answer to the question.

(20) Tell me if he will be there.

(21) Will he be there?

2.2.7 A Comparison with Other Descriptions of Questions. It is now time to compare the analysis of questions just given with some possible and actually proposed alternatives. We start by observing that there are basically three different types of analysis of questions as communicative acts. The first, and most frequent, regards questions as a subtype of requests. Thus, it entails the existence of both a requestee and an answer/response. The second finds the essence in questions in their paradigmatic contrast with assertions and thus requires neither requestee nor answer. The third and last approach regards questions as parts of assertions, the second part being provided by the answer. Here again an answer is necessary, but anyone, including the questioner himself, can provide it.

2.2.7.1 Questions as requests. The analysis of questions as requests has been advocated by logicians, linguists and philosophers alike. There has been less agreement, however, what it is that is being requested. For Åqvist (1965, 1972), Hintikka (1974, 1978), Carlson (1983), questions are *epistemic requests*, i.e. acts that request the addressee to relieve the sender of his ignorance concerning some matter. Alternatively, they have been analyzed as *assertoric requests*, i.e. as requests for telling, e.g. by Noreen (1904), Katz&Postal (1964), Searle (1969), Gordon&Lakoff (1975), Katz (1977), Karttunen (1978).

The analysis of questions as epistemic requests has the nice property of basing itself on a common human predicament, that of being ignorant of facts that one wants or needs to know. The question is then regarded as a means of expressing this predicament and at the same time requesting to be relieved from it. Assuming a general analysis of actions in terms of preconditions, action body and goals, the setting of an epistemic request can be depicted as follows:

Preconditions:	There is a question Q with appropriate answer Q' & S does not know Q' & S wants to know Q'.
Action body:	S asks R Q.
Goals:	R acts to make S know Q' & S knows Q'.

This analysis makes the question a specific strategic device. I have already given my reasons (in 2.2.3) why it fails: as a strategic device, the question is multiply ambiguous

and the context must be invoked to determine what the goals are. Among the goals we noted were the following:

- * S knows Q',
- * R tells Q' to S,
- * R makes S know what R knows of Q',
- * R takes an interest in Q,
- * R thinks about Q,
- * R and S start a discussion on Q,
- * S makes a decision on Q,
- * R agrees openly with S on Q',

Yet, the epistemic request sense may be regarded as the original sense from which the other have evolved as extensions. As remarked by Hintikka (1978) many other types of questions, such as examination questions or training questions are concerned with knowledge in one way or another. The assertoric request can easily be derived from the epistemic request, since the most obvious way in which A can make S know the answer is (usually) by telling it. If so, the telling can be made part of the goal of the question, and eventually, in some contexts, the original goal of getting to know may yield to other kinds of goal.

The analysis of questions as assertoric requests has the advantage over the analysis in terms of epistemic requests that it covers more instances of questions. Still it misses the cases where the addressee makes the sender know in some other way than telling, e.g., the question "What have you got there?" can simply be answered by showing what it is that you have got there. On the other hand, if telling is regarded as a goal of the question, it is very seldom the main goal. This type of analysis therefore seems to miss the point, e.g., examination questions fall under the heading of assertoric requests, but the candidate's telling of the answers is just a subgoal, the main goal being that of estimating how much he or she knows.

Some questions only have minimal goals, as when you ask a child a question just to focus its attention on something, but these do not make up the majority of questions between adults. An appropriate account of the question as a strategic device must be concerned with the main, non-local, goals. However, when a characterization of communicative acts is given in terms of actual effects instead of intended effects, the restriction to local effects is more natural. Such effects can be ascertained for all questions, in any case those listed in 2.2.3, yet they are specific enough to distinguish questions from other communicative acts.

2.2.7.2 Questions as contrasts to assertions. We noted above the distinction between asking and posing a question made by Lyons (1977). A similar distinction is made by Conrad (1978: 23) in terms of *communicative* and *gnoseological* questions, and by Wierzbicka (1980:315f), referring to medieval scholars, in terms of questions *through* which one is inquiring and questions *about* which one is inquiring. In my own

characterization of questions this distinction comes out as a distinction between a necessary mental effect on the addressee of a question and a typical effect on his tasks in the ongoing interaction.

For both Lyons and Wierzbicka the existence of these two types of questions is sufficient argument not to treat all questions as requests. Then, if they are not requests, what are they? For Lyons they are a kind of contrasts or complements to statements, which differ from statements primarily in the kind of attitude the sender shows towards the expressed proposition, the question attitude being one of doubt. In English this complementarity is arguably manifested in the two verbs, *tell* and *ask*, which distinguish questions from assertions in a way quite parallel to how they distinguish requests from commands in the directive class of utterances. The distinction is explicated as a contrast in the *neustic* component of utterances, which is a mark of the sender's commitment to the factuality, desirability or whatever the case may be, of the propositional content of the utterance. Statements and commands have a neustic "I-say-so"-component, whereas questions and requests have a neustic "I-don't-know"-component. In the case of requests Lyons is not explicit, but that is the way I interpret him. In any case requests have a different neustic component from commands, but share the so called *tropic* component, which is spelled out as "So-be-it", as opposed to the "It-is-so"-component of statements and questions.

Another variant of this type of analysis is given by Kiefer (1981). He gives questions the general form $Q(P)$ where Q is a question operator and P a propositional content. The interpretation of Q is the following (ibid., p. 162):

"The speaker (=S) poses P as an open structure that calls for a solution. (In short: S *poses* P)."

With this characterization nothing needs to be said why a solution is needed, or whether the open structure is posed as part of a request or as a formulation of a problem. All such matters, in Kiefer's view, are determined by contextual factors, in particular by what the different participants know about P .

Kiefer's description, as well as Lyons', fit well with what I in 1.3.5 termed "Common-content theories" of IFIDs. Kiefer is more radical than Lyons, however, in abstracting away not only from the request aspect of questions, but also from speaker attitudes. In this model the significant difference between questions and statements turns out to be the expression of an open structure in questions as opposed to the expression of a closed structure (a proposition) in statements. In the more conservative theory, the significant difference lies in the presence of an attitude of doubt in questions as opposed to an attitude of commitment in statements.

An abstract analysis of illocutionary force is perhaps nowhere so motivated as in the case of questions with their many varied uses. It is important to note the way that context affects interpretation, but context does not carry all the burdens of

signification. We seem to interpret isolated linguistic expressions in the same terms as utterances in a specified context, which means that sometimes a linguistic expression alone is sufficient to suggest and support quite "saturated" interpretations. I therefore think it necessary not only to include the necessary properties of questions as part of their proper characterization, but also the typical features that function as defaults in underspecified contexts. The first clause of my own characterization ((14) above) is very similar to Kiefer's, although I explicitly refer to topic and think it necessary to give a pragmatic characterization of the notion of an open structure (see 2.3). However, I have also included the clauses (iiia-b), as it seems to me to be the unmarked case that questions as communicative acts have addressees and invite sequels in the manner described. When I read an interrogative sentence as an example of a question, the answer (if I know it) comes to me without effort, which indicates that the recognition of a question almost automatically has the effect of initiating a search for the answer.

It may be that, as Lyons (1977: 754) puts it, "the difference between declarative sentences and interrogative sentences (in those languages in which such a distinction is drawn in the verbal component of sentences) results from a grammaticalization of the feature of doubt". But doubt is certainly not an attitude that can easily go along with x-questions, where one instead would suggest ignorance (whether real or purported) as a typical attitude. Clause (ii) of (14) is not directly a statement about speaker attitudes, but it states a way of relating oneself to information which is compatible with such attitudes as doubt or ignorance. In the same way as for goals, a number of different attitudes are compatible with the asking of a question, e.g., surprise, curiosity and anxiety, in addition to those already mentioned. Hence, I think it would be wrong to pick out one particular attitude as typical of questions.

2.2.7.3 Questions as parts of statements. A third view of questions is to treat them as incomplete entities that are completed when they receive an answer. The pair of question and answer then functions as a statement having two constituents, which may or may not be distributed across turns. This analysis has been proposed by some analysts of dialogue, in particular Keenan et al. (1978), but is more common with authors whose primary concern is the logical structure of questions and answers, e.g., Egli (1974), Keenan&Hull (1973), Hausser (1980, 1983), Hirschbühler (1979).

Keenan et al. (ibid.) point out that many questions used by caretakers to children are directives to attend, as in (22) (p. 51):

(22)

C: Oh I don't want drink it out cup/ want drink it out can/

Mo: Oh, what did I say about that? What did I say about
drinking it out of the can?

C: (*pointing to can*) I want drink it out can/

Mo: Aw, well that's not such a good idea, honey.

The mother's question here is an attempt to get the child to remember something she has been told before and which is of immediate relevance in the situation at hand. It is a case of what the authors call *questions of immediate concern*. A basic function of questions between caretaker and child, and even between young children, is to articulate such immediate concerns and drawing the listener's attention to them (*ibid.*, p. 52f). These questions are much more common than information seeking questions, which require that the child is more mature.

When the caretaker has the child's attention on some particular item, he or she can go on saying something about it. In this way a statement is distributed across a series of sentences. (23) is an example.

(23)

Mo: You know what Mommy has?

Mo: I have something you've never seen before.

Mo: We have some bubbles.

/Ochs Keenan et al. (*ibid.*, p. 50)/

A statement of this kind may also be distributed across turns as when the child is asked to name something which she is being shown and then does so. In any case, what is made known in such a sequence of sentences is equivalent to what could have been made known in a single sentence. Thus, question-answer sequences can be seen as a particular strategy for making something known, an alternative to ordinary statements which has certain advantages due to its bipartition, e.g., it allows one to consider the problems of understanding that a child may have, and it allows the actors to have one turn each if that is desirable.

The demonstration by Keenan et al. shows two important things, first, that functional units such as statements may be distributed across turns and sentences (cf. 2.2.1 where we demonstrated the same thing for questions) and, second, that the question contains or gives information from which one can build statements. In (14) I have expressed this fact by saying that a question brings with it a topic for the subsequent discourse.

2.3 The Question as Conceptual Object.

The purpose of this section is to explicate the notion of a question as a conceptual object and the relation between questions in this sense and the notion of topic as it was used in the characterization of questions as communicative acts. First I will introduce some important concepts that will be used in these explications.

2.3.1 Domains of specification. By a *domain of specification* I mean any aspect of reality, or more generally, a universe of discourse, that we can have (or get, give) information about. Information is not necessarily expressed by linguistic means, but I will restrict myself to such cases for which information can be expressed verbally. When someone gives information that relates to a domain of specification, I will say that the domain is *specified*. When no misunderstanding can occur I will refer to domains of specification simply as *domains*, and to the expressions used in their specification as *specifying expressions*.

A domain of specification can be analyzed into a *basis*⁴ and a *domain concept*. The basis is minimally an object of some sort (an individual, a location, an event, etc.) or a set of related objects. The domain concept is (usually) a nominal concept which indicates a way in which other objects may enter into relations with the basis. Domains relate to domain concepts as tokens of a type and to bases as wholes to parts. The following are a few examples:

- * The name of a person,
- * The colour of a dress,
- * The weather conditions at a certain place at a certain hour,
- * The time an event occurred,
- * The agent (or patient, goal) of an action,
- * The comparative magnitude of one number with respect to another number.

The use of the definite article in these domain descriptions indicates that the domain can be exhaustively specified by a single specification. However, it is also possible to use an indefinite description of a domain, which indicates that the domain is regarded as having alternative possible specifications. A few illustrations of indefinite domains:

- * A movie you like,
- * A colour that goes well with green,
- * Something that has happened within a given time interval.

A domain concept is often associated with a particular sub-language, i.e. a set of

⁴ For discussion of this notion and its relation to notions such as *background* and *presupposition*, see 2.3.3.5 below.

primitive expressions and a syntax which allows us to combine the primitive expressions. The syntax may, just as the primitive expressions, be more or less unique to the domain concept, or, in any case, employ only some of the modes of combination that are possible in the language. Domain concepts that in many languages have special syntax are, for instance, personal names, hours of the day and numbers. As an example of a formative rule that is restricted in its application, consider the possibility of forming complex specifying expressions of the form S-S, where S is a primitive specifying expression. This formation rule can be used with colour words in Swedish, but not with words indicating temperature: We have *blågul* (blue and yellow), *rödbrun* (reddish brown), but not **kallwarm* (cold-warm), or **varmljummen* (warm-tepid). The sub-language associated with a domain concept is referred to as a *domain language*.

If we look again at the examples, say the second case, the weather at a certain place at a certain hour, the basis is given by the place and hour and the domain concept is 'weather'. Now, there are different ways in which the weather can be specified. In fact, it seems that we specify the weather in terms of a number of sub-domains: temperature, wind, precipitation, cloudiness and so on. Yet it is the weather which is the relevant domain concept, as information on any of the sub-domains is always taken as information on the weather. Thus, if someone says "*It is raining*", that will generally be taken as a statement about the weather, not just about precipitation.

Domain concepts are often inherently restricted as to the type of specification they allow. The agent of an action is an animate being, the name of someone is a name in the general sense, and so on. Specific domains can be more restricted than that. For instance, it may be known that an agent of a particular action was a boy and if someone tells someone else who that boy was, we can talk of the domain of that utterance as "the boy who did it".

Bases, specifications and domains are relative notions. A certain relation may at one time be offered as a specification and at another be taken as a basis for further specification. This is very common in conversation. Consider the following dialogue:

(24)

A: Why did he do it?

B: He'd run out of money.

A: How come he'd run out of money?

Here the fact that the referent of *he* was out of money is first given as a reason for an action, i.e. as a specification of a domain, and then taken as a basis for a follow-up question. A slightly different example is (25):

(25)

A: What do you want to know?

B: I want to know why he did it.

A: He was out of money.

Here B introduces a domain of specification as a proper answer of the preceding question, i.e. as a proper specification of the domain 'the thing B wants to know'. This domain is then specified by A in the next turn.

Thus, what is a specification from one perspective, may be a basis, or a domain from a different perspective. However, under a fixed point of view the three concepts are distinct. This is true also for identifications. To identify some X as Y, say the person standing next to me as 'Tom', is to specify the domain 'the identity of X', where X constitutes the basis, this basis being the person as he is given in the context. This domain contrasts with other domains involving X, e.g., X's age or weight. The specification Y, on the other hand, picked out by the expression *Tom*, is different in that context from X and the message, so to speak, is that these two entities, the basis and the specification, should be conflated into one.

It is important to note that domains of specifications are not linguistic entities. They are situated in the universe of discourse. Only the interpretation of a linguistic expression in a context can make reference to a domain of specification. Similarly, we can not identify specifying expressions and specifications either. If we have an extensional domain, the specification will be an object of the universe and there are different ways in which that object can be identified linguistically, as well as non-verbal means of doing it. However, domain concepts and domain languages are linguistic entities.

2.3.2 On the Representation and Role of Domains of Specification. For the representation of domains of specification, as well as utterance interpretations later on, I will use directed acyclic graphs, or DAGs for short. A DAG differs from a tree in that the nodes that are daughters of the same node are not ordered with respect to each other. DAGs have been used for grammatical representation by e.g. Kay (1979), Kaplan&Bresnan (1982) and Shieber (1984) and for semantic representation by Halvorsen (1983).

Non-terminal nodes of a DAG are labelled with *attributes*. The subgraph dominated by a non-terminal node is the *value* of the attribute associated with that node. In the simplest case the value is an atom just as the attribute itself.

The DAG of a domain has two necessary attributes, one representing the basis and the other representing the domain concept. They are written BASIS and DCON respectively. A third possible attribute represents the distinction between definite and indefinite domains and is written D/I. As an example consider the representation of the domain *the colour of d*, where *d* is a given object, say a dress.

$$(26) \quad \begin{bmatrix} \text{BASIS} & d \\ \text{DCON} & \text{COLOUR} \\ \text{D/I} & \text{Def} \end{bmatrix}$$

If someone specifies this domain, e.g., by uttering the sentence (27), the domain is put in relation with a possible specification for it. This relation is illustrated in (28), where the DAG (26) has been rooted under the attribute DOM, for domain, and the specification under an attribute SPEC.

(27) The dress is blue.

$$(28) \quad \begin{bmatrix} \text{DOM} & \begin{bmatrix} \text{BASIS} & d \\ \text{DCON} & \text{COLOUR} \\ \text{D/I} & \text{Def} \end{bmatrix} \\ \text{SPEC} & \text{Blue} \end{bmatrix}$$

When in chapter 5 I discuss the interpretation of utterances, structures such as (28) (in slightly elaborated form) will appear as part of representations of utterance interpretations. It must be observed, however, that (28) is not a representation of the meaning of the sentence (27), nor is it a representation of the fact that the dress is blue (supposing it to be a fact). As for sentence meanings I do not give representations of them at all, as I do not believe them to be useful (cf. 1.4). As for the representation of facts the notions of domains and specifications are not applicable. A fact may be structured in terms of domains and specifications in different ways, but such a structuring is only temporarily relevant, e.g., during some part of a dialogue.

Facts can also be represented by DAGs. (29a) and (29b) can be taken as alternative representations of the fact that *d* is blue.

$$(29a) \quad \begin{bmatrix} \text{REL} & \text{Be} \\ \text{ARG1} & d \\ \text{ARG2} & \text{Blue} \end{bmatrix} \quad (29b) \quad \begin{bmatrix} \text{REL} & \text{Blue} \\ \text{ARG} & d \end{bmatrix}$$

These representations can obviously be equated with the expressions (30a-b) of predicate logic (or some richer logic):

- (30a) $\text{Be}(d, \text{Blue})$
 (30b) $\text{Blue}(d)$

It may now be asked if we could not take such logical expressions as a basis for forming expressions representing domains by an abstraction operation. The sentences of (30) can be related to the abstracts of (31).

(31a) $\lambda x (\text{Be}(d, x))$

(31b) $\lambda P P(d)$

One thing which is missing from these expressions is a representation of the domain concept. Although facts can be structured in terms of domains and specifications in different ways, the domain concepts that are parts of such structurings must be inherent in the facts. Thus, I assume a logical structure of (27) in terms of three elements rather than the traditional binary division in terms of a predicate and a subject (argument). The third element is the domain concept, the way the predicate predicates something about the subject. An argument in support of this analysis is that (27') seems to express the same fact as (27).

(27') The colour of the dress is blue.

One way to represent this structure is to regard variables and constants as being sorted in terms of domain concepts. Alternatively, domain concepts can be regarded as two-placed predicates. This is what I will do here. Then the fact that d is blue is represented as in (32). If we form an abstract from (32) wrt the second argument, we get (33).

(32) $\text{COLOUR}(d, \text{Blue})$

(33) $\lambda x \text{COLOUR}(d, x)$

(34) $\lambda x \text{COLOUR}(d, x) (\text{Blue})$

However, (33) is not a suitable representation for a domain of specification, at least not if we assume the ordinary semantics for abstracts, i.e. regard (33) as a function from appropriate arguments to truth-values or propositions, so that (34) by λ -conversion comes out as equivalent to (32).

There are several reasons for this. First I wish to avoid a semantics based on propositions, since propositions are at the same time too abstract and too specific. They are too specific since the standard of appropriateness with which we evaluate a specification is not always truth (cf. above 2.2.3). They are too abstract (as usually regarded), since they are "unattached" entities existing outside of time and space which can be evaluated for their truth-value in any possible world. Instead I regard the universe of discourse as an organized, connected set of (existing and fictive) individuals and facts which is monitored during a dialogue and temporarily structured in terms of domains and specifications.

Second, the interpreter must be allowed to intervene in the evaluation of the relation between domain and specification. When a domain is specified in an utterance, it is

the task of an interpreter to decide whether a given specification is appropriate or not and hence should be integrated into the universe of discourse. Thus, the inference from (28) to (32), in contrast to the one from (34) to (32), is guided by subjective decisions on the part of the interpreter and the relation between utterances and facts is only indirect.

A third reason is that we relate ourselves to domains in different ways as compared with specifications. A specification can be affirmed or denied, but a domain cannot; it is specified or put up for specification. Thus, if we are to represent such relations in representations of utterance interpretations, which will be done in chapter 5, we must be able to identify the domain and the specification separately. This is easily done in a DAG such as (28), but more cumbersome in an expression of the form (34).

2.3.3 Domains of Specification and Information Structure. Most utterances, whether spoken or written, long or short, can be said to be about something. The predicate 'be about' is a vague one, yet one which has been used quite often to characterize thematic linguistic entities. In this section I will argue that some of the things that an utterance, or a text or dialogue, is about are domains of specification and, consequently, bases. A comparison with other notions used in the description of information structure is also made.

2.3.3.1 Aboutness. A sentence, such as (35), is often said to be about the referent of its grammatical subject, and this referent is variously referred to as the *topic* (Hockett, 1958: 201), the *theme* (Mathesius, 1975), or the *subject* (Chafe, 1976: 43, also referring to tradition). But (35) does not only tell us something about Bill, it also tells us something about what Bill is doing. In this latter sense, the sentence gives information on a particular domain of specification for which Bill is the basis. However, there is more than one way in which (35) can give information on domains of specification. Consider the contexts (36)-(37) for (35):

(35) Bill is sleeping.

(36) A: Someone is sleeping.

B: Who?

A: Bill is sleeping.

(37) A: You can't play here now.

B: Why not?

A: Bill is sleeping.

For (36) the relevant domain is the identity of the sleeper and for (37) the reason why it is not possible to play. Thus, to determine the domain, or domains, that an utterance is about, we can not rely on the expression only, but have to use evidence from the context.

One may ask whether the utterances in (36) and (37) are about Bill in the same sense as the utterance of the first case. I am inclined to say yes and no. In one sense an utterance can be said to be about all the things that are explicitly mentioned in it, at least as long as the utterance can be construed as giving some information about them. Bill is mentioned in all the three cases we considered and in all of them we get to know what he is doing. So, in that sense, they are all about Bill. On the other hand it is only in the first case that Bill is part of — here, actually constitutes — the basis of the contextually relevant domain of specification, something which almost by definition makes him part of what the utterance is about. That is, if utterance *u* is about domain, *D*, and *x* is an expressed part of the basis of *D*, then *u* is also about *x*. In particular, if *x* constitutes the basis of the domain, then *u* is about *x*. In (36) and (37) Bill neither constitutes nor is part of the basis. Instead he is introduced as part of the specification and so is not given as an object which the utterance would be about.

These differences in information structure can be represented as in (38) and (39). (38) corresponds to the interpretation that Bill constitutes the basis and (39) to the interpretation that (35) is uttered as a reason for something.

(38)	DOM	Basis DCON	<i>Bill</i> Action
	SPEC		
		Sleep	

(39)	DOM	Basis DCON	Fact f1: <i>Mary cannot play</i> Reason
	SPEC		
		Fact f2: <i>Bill is sleeping</i>	

Let us now introduce the following terms: any contextually given or suggested domain of specification that an utterance (text) is about will be referred to as a *topical domain* of that utterance (text) and anything mentioned in an utterance that refers to a part of the basis of a topical domain will be referred to as a *theme*. With this definition of theme it will obviously be the case that many utterances and texts will have more than one theme. It will probably also be the case that we will have the intuition that the utterance is more about some of these than it is about others. I will not introduce any finer distinctions than this, however, as my primary interest is with topical domains, not themes. Also, it follows that my notion of topical domain does not account for all aspects of "aboutness".

2.3.3.2 *On the notion of topic.* The notion of topical domain just defined relates to an aspect of the information structure of utterances that is often overlooked in linguistic

descriptions, namely the paradigmatic aspect. Whether one makes the distinction between what is being talked about and what is being said about that which is being talked about in terms of subject and predicate, given and new, theme and rheme, or topic and comment, the result is two labels that can be applied to actual constituents of sentences. The paradigmatic aspect of the second part of these pairs, viz. in what respect it gives information on the first part, is very often not observed. The same syntagmatic bias can be seen also in some approaches to textual cohesion. Halliday&Hasan (1976), for example, defines cohesion as follows (ibid., p. 4):

"The concept of cohesion is a semantic one; it refers to relations of meaning that exist within the text, and that define it as a text. Cohesion occurs where the *interpretation* of some element in the discourse is dependent on that of another."

In other words, textual coherence is confined to relations between elements that co-occur in the text and cannot be induced from outside, say, from knowledge of what the text is about.

In sociological or anthropological models of discourse structure the paradigmatic aspects of information are usually recognized, although the emphasis in these descriptions is usually put on discourse structure. Both Hymes (1972) and Ervin-Tripp (1972) recognize topic as an important notion and observe that participants of a conversation are aware of what the topic is. Ervin-Tripp (ibid., p. 243) writes:

"When conversations have an explicit message with informational content, they can be said to have a topic (...)."

"(...) We can thus argue that topic, like speech-act, must be a basic variable in interaction on the grounds that speakers can identify topical change as generating code shift, that speakers can sometimes report what they are talking about, and that topical continuity, recycling and change may be normative features of speech events, or at least relevant to values about good conversations."

Yet, the notion of topic has not often entered into descriptions of conversational structure, and, when it has, with unclear theoretical significance. The parts of adjacency pairs and triplets are usually defined in terms of each other, not in terms of a contextually given topic. It has been noted, of course, that larger chunks of a discourse can be set off from its environment by being about a certain topic. Stenström (1984) offers the following characterizations of a sequence and a transaction, respectively:

"A sequence consists of an unbroken series of Q/R exchanges dealing with a particular aspect of a wide topic; a series of sequences constitutes a transaction." (ibid., p. 89)

"A transaction consists minimally of one exchange, maximally of a coherently related series of exchanges: 1) in which the initiating Q is not adequately answered until the last exchange or 2) in which a certain topic/aspect of a topic is introduced, negotiated and brought to a close." (ibid., p. 71).

What we are not told is what a topic is, how it can be recognized, or how it can be analyzed. In fact, there are only few analyses of discourse topic, but there are some that I will briefly report and compare to my own notion of topical domain.

2.3.3.3 *Topic as a question.* A common way of getting at the topical structure of an utterance is the question-test, i.e. finding out what question the utterance is an answer to. In modern linguistics Hatcher (1956) was perhaps the first to use it, without referring to the questions used as discourse-topics. Two recent approaches to discourse topic, on the other hand, Keenan&Schieffelin (1976) and Carlson (1983), essentially do just that.

Keenan&Schieffelin introduce *questions of immediate concern*, characterizing them as "the question (or set of questions) an utterance is a response to" (ibid., p. 344). The question of immediate concern may be explicit in the conversation, but need not be. Even when it is not, it is attributed a psychological reality: the listener "constructs" questions of this sort in interpreting utterances that are addressed to him: "the listener takes the utterance and relates it to some aspect of the utterance context /.../ The listener then must ask how the utterance is related to that feature of the context, that is, the listener asks, 'What is the speaker informing me of?'" (p. 343). On the other hand, questions of immediate concern are also regarded as a theoretical construct from which a notion of discourse topic may be derived. The discourse topic is "the proposition or set of propositions that the question of immediate concern presupposes" (p. 344). But evidently not all presuppositions of a question can be equally relevant and so the element of concern is allowed also to enter into the characterization of discourse topic: it is "the proposition or set of propositions expressing a concern the speaker is addressing" (p. 343).

Keenan&Schieffelin do not explain what they mean by propositions. In any case they are not just referring to sentences as their propositions have referents in them. The task of establishing discourse topics, which is the main topic of the paper, is described as concerning the identification of "those objects, individuals, ideas, events, etc., that play a role in the discourse topic". I also think that we need to make such things known to our interlocutors in order to make it clear what we are talking about, but this does not amount to fixing their attention on a proposition, at least not in the logical sense of that word. It means rather to fix their attention on a basis of a domain of specification, i.e. something located in the universe of discourse, into which new information can be fitted.

Also, it is unintuitive to say that an assertive utterance is made in response to a question, unless the question is explicitly asked. To say that is to make too much out of the question test. Therefore, I believe that my notion of topical domain is preferable to questions of immediate concern as a basis for a notion of discourse topic. It also has the advantage that the notion of question can be defined in terms of it, rather than be taken as an unanalyzed primitive.

Carlson (1983) characterizes a *dialogue topic*, or *topical question* as he also calls it, as a problem which the participants of a dialogue are interested in (ibid., p. 250) and which can be represented by an interrogative sentence. At any stage of a dialogue there are one or more topical questions that occupy the attention of the participants. The topical question is for Carlson one answer to the question of what utterances are about, the other thing being an object, called the *dialogue subject*. A dialogue subject is defined relative to a given topic, S' as the intended referent (if any) of the grammatical subject of S'.⁵ Given the topical question "What is Bill doing?" in a context of (35), the referent of Bill will be the dialogue subject.

A dialogue subject is a particularly prominent theme, if theme is taken in the sense defined above. I have no quarrel with that notion; it seems to be a fact that referents of grammatical subjects have a privileged thematic status (cf. Carlson, ibid., p. 252f; Anward, 1981: 145f). Carlson's notion of dialogue topic, however, is left unanalyzed. By choosing interrogative sentences as the only form of representation for dialogue topics, Carlson actually opts out of such an analysis. It is natural for Carlson to do so, as his whole model of dialogue is couched in terms of sentences, but the conceptual nature of a problem is important and I believe this to be the case for participants of information-seeking dialogues too. Without knowledge of the realities of a given problem we would not know how to answer it, or what would count as an answer, but these realities can never be fully expressed when the problem is stated as a sentence, e.g., most interrogative structures do not give expression to the domain concept of a topical domain. Thus, we need a way of representing the topic which does not identify topics with sentences.

Carlson's analysis of aboutness is on the whole very enlightening, but is unfortunately distorted towards the end. Having arrived at the two notions of dialogue topic and dialogue subject, he wants to establish a connection between them. He finds this connection in the phenomenon of concealed questions, i.e. noun phrases that express questions (Ross, 1969; Grimshaw, 1979). Thus, the two sentences below have the same interpretation:

- (40) Bill knows my telephone number.
- (41) Bill knows what my telephone number is.

⁵ - - - -

More generally, a dialogue subject can be defined relative to any premise, S', as the referent of the grammatical subject of S' (ibid., p. 246).

Carlson claims a similar relationship between (42) and (43):

(42) I know Bill.

(43) I know who Bill is.

And then makes the assumption that the same kind of relation holds for objects of *about*:

"..., that a sentence is *about* a particular object means that it is addressed to a particularly simple topical question whose subject is that object, viz. the question *what that object is*. This simple question of identity is thus found concealed in the notion of dialogue subject. A sentence is about an object if it is addressed to the question what that object is." (ibid., p. 251).

This reduction of objects to identity question seems to me both unintuitive and false. The identification is contextually dependent. It may work for verbs such as *know*, but does not work for verbs such as *forget* or *discuss*, even though they accept concealed questions. The a-sentences below are not equivalent to the b-sentences.

(44a) She forgot the little baby.

(44b) She forgot who the little baby was.

(45a) They discussed their new neighbour.

(45b) They discussed who their new neighbour was.

In particular, the equivalence does not hold for the relation 'be about'. (46) is no contradiction.

(46) Sentence (40) is about Bill, but not about who Bill is.

Moreover, it makes the notion of dialogue subject, as initially explained, empty, since everything which is referred to in an utterance can now be said to be a dialogue subject in virtue of being the referent of an underlying identity question. The dialogue (47) (ibid., p. 270) is analyzed as containing a number of concealed identity questions, one for each of the four referents introduced:

(47) -Who invented penicillin? Was it Nobel?

-No, penicillin was invented by Fleming. As for Nobel, he invented dynamite.

For example, penicillin is established as a dialogue subject in virtue of being the grammatical subject of the topical identity question "What is penicillin?". This introduction of topical identity questions is quite unwarranted and it is also unnecessary. The first sentence is about penicillin, because penicillin is part of the

basis of the introduced dialogue topic, namely 'the inventor of penicillin'. Similarly, the last sentence is about Nobel in virtue of addresssing the topical domain 'What did Nobel invent?'. As far as I can see this is all that needs to be said. The fact that *penicillin* is not a grammatical subject only shows that grammatical subjecthood is not a necessary condition on prominent thematic status, i.e. that objects that may have status as dialogue subjects, or themes, are not confined to referents of grammatical subjects.

Although a topical domain may involve a specific individual, it is important to keep topical domains and individuals separate. A topical domain always makes reference to a domain concept, which may be identity, but very often is something else.

2.3.3.4 Topical coherence. Since domains of specification may be the topical domains of sequences of utterances or whole texts, they are also valid as determiners of textual coherence. A sequence of utterances or sentences are apprehended as coherent if they can be related to the same domain of specification. Furthermore, the typical minimal sequences that are so frequent in conversations, pairs, triplets or quadruplets, are usually tied to a single domain of specification. Larger structural parts of a text or conversation can also often be subsumed under one domain of specification which is developed in various ways during that part (cf. quotations from Stenström (1984) given above). Similarly, when a topical domain is closed down, or abruptly changed, this is formally marked in some way.

Domains of specification play a major role also in the proper interpretation of potentially ambiguous terms. In our discussion of "*Du tar elva*" in 1.4 we noted that a proper interpretation of that expression can be made only if we have knowledge of the context. We can now say that what we need to know is the domain of specification that that utterance pertains to. Of all the different domains of specification that the term *elva* can specify, it is only one which is contextually relevant and, when that domain is invoked, we know exactly what is meant.

In that example knowledge of which domain is relevant has to come from knowledge of the context, in this case, knowledge of the relevant 'frame' or 'script'. But such knowledge may also stem from the co-text, as in the following examples:

- (48) Bill didn't give Mary a present, but John did.
- (49) Bill didn't give Mary a present, but he wrote her a letter.
- (50) Bill didn't give Mary a present, but she was happy nevertheless.

Here, (48) must be understood as being about people that gave Mary presents, (49) about what Bill did for Mary on some occasion, say in connection with her birthday, and (50) both about something that happened to Mary and how she reacted to it. Only in this way do the two conjoined expressions get coherent interpretations. Introducing domains of specification in this way amounts to viewing the above sentences as texts. There are many ways of construing the first conjunct, which is

identical in all three examples, as a message, i.e. as specifying a certain domain, but the second conjunct helps us determine a definite interpretation. With this interpretation we understand what is being negated in the three cases, in (48) it is denied that Bill is someone who gave Mary a present, in (49) it is denied that what Bill did to Mary was to give her a present, and in (50) it is denied that a certain, probably expected, event occurred, viz. that Bill gave Mary a present.

2.3.3.5 *Domain-specification, background-focus and related distinctions.* The notions that I have introduced, domain of specification, basis and domain concept are obviously related to notions such as presupposition, background and focus (Dahl, 1974), and Given and New (Haviland&Clark, 1974). I make no attempt to review the history and application of these notions (for some discussion, see Anward, 1981) but merely want to point out the most important differences between my notions and what I take to be the common meaning of the other terms.

First of all, the notions of basis and domain do not refer to parts of utterances, but to elements of their interpretation. Second, I regard them as objects of the universe of discourse that utterances can be about. In that sense they differ from presupposition and background which are not usually taken as dialogue topics. Furthermore, the domain is not identified with an existential proposition as presuppositions commonly are. In fact, specifications can be existential, as in (52), or negative as in (53). The domain expressed by the question (51) merely provides a slot in which such specifications, as well as more informative ones, can fit. It may be that an answer such as (53) is a case of presupposition failure. In terms of domains, though, all utterances (51)-(53) have the same domain. In (51) the domain is being put up for specification and in (52) and in (53) it is being specified.

- (51) Who did they see?
- (52) They saw someone.
- (53) They saw noone.

There is a closer correspondence between the notions of specifying expression and focus. The constituents usually labeled focus in descriptions that employ this notion correspond to expressions that I would say specify the topical domain. However, while focus seems applicable to Wh-phrases, the notion of specifying expression is not, since a Wh-phrase cannot be specifying (cf. 6.1.1).

Given and New are also primarily used as labels for constituents, but could of course be used as applying to the interpretations of these constituents. As Carlson (1983) points out these two notions are relational in character; nothing is given or new except in relation to something else. The question is what this something else can be. Something may be new in relation to what a dialogue participant knows, or is assumed to know, but this is not the only interpretation; information may be new in relation to a dialogue state, and considerations of such a property seem important in deciding whether to express a basis verbally at all, or assume it to be recoverable from the

context. Finally, a specification may be new in relation to a dialogue state and a current topic, as when someone answers a question with a specification that has not been used so far in the dialogue. This holds irrespective of whether that specification is already known by all participants, by some of them, or by no one except the speaker.

So far as the distinction between topical domains and specifications is concerned, the notions of given and new must be allowed to apply to both of them. A topical domain can be regarded as new when it is introduced for the first time into a dialogue, i.e. in the second sense mentioned above. In those instances where it is not introduced for the first time, it can still be said to be new in relation to a dialogue state; the speaker may find that it needs reintroduction, if his audience does not attend to it as he wishes.

However, it is not sufficient to describe a topical domain as just a new domain. Besides being new, the topical domain is of more interest than the others; its specification is being viewed, at least temporarily, as an end in itself, whereas other specifying expressions that pertain to other domains are instrumental to this end.

Haviland&Clark (1974) employ the term *Antecedent* for the interpretation of a Given constituent and appears to regard it as a complex of propositions. In contrast I regard the basis of a domain as an entity: a material object, an event, a fact, or whatever. The knowledge that an interpreter has about such entities may of course be expressed as a complex of propositions, but it is important that this knowledge is viewed as knowledge about that particular entity (cf. 5.2.3).

2.3.4 Questions and their Environments. Before I propose a characterization of questions as conceptual objects, I will make a small digression and take a note of the environments in which questions tend to occur. Questions are not confined to question-answer dialogues, they may, for example, be objects of thought, investigations or disagreements. When such actions are described, the question is usually expressed by means of a subordinate *Wh*-clause, as in (54)-(56):

- (54) We considered how it could be done.
- (55) The police are investigating which people had access to the keys.
- (56) They were having a fight about where to go on their holidays.

Such descriptions have paraphrases in which the complement is explicitly specified as a question, or problem, matter, etc. If the question is given in the context, we may refer to it anaphorically by such descriptions in the complement position, although it will sometimes be necessary to prefix it by a preposition to get an acceptable sentence:

- (57) We considered the problem for quite some time.
- (58) The police are investigating that question now.
- (59) They were having a fight over the issue.

It should be noted that these substitutions are not acceptable for all Wh-complements. The result of such a substitution may be a sentence with a different sense, if it is acceptable at all (cf. 6.2):

- (60)a. She didn't tell us where she had been.
 (60)b. She didn't tell us the question. (A different sense)
- (61)a. He forgot what to say.
 (61)b. He forgot the matter. (A different sense)

This gives us two type of predicates with Wh-complements. For the first type the Wh-complement expresses a question in the real sense, for the second type it expresses something else. If we look further at these two types of predicates, we will discover that there is a strong tendency for the second type to take either factive *that*-complements, or *to*-complements expressing an action. Let me refer to such complements as *informative* complements. Conversely, the first type of predicate only rarely accept informative complements. Compare (62)-(63) to (64)-(66) in this respect:

- (62) She didn't tell us that she'd been to see Jim.
 (63) He forgot to introduce the guests.
- (64) *We considered that it could be done by using a ladder.
 (65) *The police are investigating that a clerk had access to the keys.
 (66) ?They were having a fight about going to France for the holidays.

The difference in complementation between the two types of predicate has a natural explanation if we consider the types of situation they describe. What you think about, investigate or disagree on is a domain of specification for which no appropriate specification is at hand. The reasons for not finding an appropriate specification and the criteria of appropriateness may vary from one situation to another, but this much they do have in common. For the other type of situation a specification is in principle available, but for some reason unexpressed. If someone doesn't tell you something, it means that information (i.e. specifications) are withheld, and if you forget something, information is in principle available, but accidentally inaccessible.

The first type of situation thus implies a kind of necessary ignorance. But this is not all: it is also characterized by a certain activity geared at obtaining appropriate information. If you are thinking about a problem, you may suddenly see a solution; if you are investigating something you may discover the truth; and if you are disagreeing on a matter, you may in the end reach agreement or some sort of compromise. If this happens the situation has changed from one of the first type to one of the second type; the predicates we just introduced are all of the second type:

- (67)a. ?We saw the matter.
 (67)b. We saw that it could be done by using a ladder.

- (68)a. The police discovered the question. (Wrong sense)
 (68)b. The police discovered that a clerk had access to the keys.

- (69)a. They finally agreed on the matter. (OK)
 (69)b. They finally agreed not to go anywhere.

Let us refer to any type of situation that shows this kind of necessary ignorance with respect to some domain of specification as an *ignorative* situation. In the same vein the predicates that express such situations will also be called *ignorative*. Ignorative situations will be contrasted with *factive* situations, i.e. situations in which subjects have, or get, valid information on the relevant domain and the predicates that express such situations will also be called *factive*.⁶

If an agent in an *ignorative* situation adopts an inquisitive attitude and engages in some activity that eventually may lead to a *factive* situation, I will call the activity in question, the situation as a whole and the corresponding predicates *interrogative*. It is in *interrogative* situations that the domain of interest typically has status as a question. However, it is possible for agents to behave as if a situation is *ignorative*, even if it is not. In such cases we will say that they adopt an *ignorative perspective* towards the given domain. The same "pretence" is of course also possible with *factive* situations.

Let me give some examples of a chosen, as opposed to a forced, *ignorative perspective*. One is given by the lecturer who, for pedagogical purposes, asks questions that he himself is going to answer. A more extreme case is of course the orator who asks rhetorical questions, i.e. questions that not only himself but also his audience know the answer to. A different case is when we, due to indifference or disinterest, choose to ignore information that is available to us. Such attitudes can be expressed in conversations and they then normally put an end to further talk on the topical domain:

- (70) A: Do you know what I am going to do?
 B: I don't care what you are going to do.

The contrast *ignorative-factive* can also be extended to linguistic expressions. We saw above that *interrogative* clauses can occur as complements of *factive* verbs, as in (60)a (repeated below). I will then say that the speaker uses an *ignorative presentation* of the fact referred to by the complement. Thus, *ignorative presentations* may also be used to present non-*ignorative* situations. Conversely I may use a *factive presentation* of a fact that someone is ignorant of, as in (71).

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⁶ The term *ignorative* is borrowed from Wierzbicka (1980), who refers to Karcevski (1969), and the term *factive* from Kiparsky & Kiparsky (1970). Both works use the terms only as grammatical terms, however, i.e. as applying to linguistic expressions.

(60)a. She didn't tell us where she had been.

(71) He doesn't know that she is here.

INTERROGATIVE ACTIVITY	FACTIVE RESOLUTION	IGNORATIVE PERSPECTIVE
Ponder (over), Think of doing	Make up one's mind	Lack of resolution
Discuss	Decide	Lack of resolution, Disagreement
Disagree, Fight over	Agree, Reach an agreement	Disagreement
Ask a question	Answer	Lack of Information "You-say-it", etc.
Pose a problem	Solve it	Lack of information "You-do-it"
Investigate, Inquire	Discover, Find out	Lack of Information
Think about, Wonder at	Realize	Lack of Information

Table 1: *A List of Interrogative Activities.*

A question-answer dialogue involves a transition from an ignorative to a factive perspective on some domain (if the answer is accepted). Whether it also involves a transition from a truly ignorative situation to a factive situation is a matter of context. If the question can be taken as an epistemic request, we have an ignorative situation to start with, but there are, as we have seen, other types of question for which this does not hold. For many of these, the ignorative perspective is adopted because it is more important who gives the answer than what the answer is. We may speak of a "you-say-it"-attitude on behalf of the speaker. These are the cases where the label *assertoric request* is most appropriate. In fact, of all interrogative activities, that of asking a question seems to be the one which is least tied to a definite type of ignorative perspective.

A number of interrogative activities together with their most likely factive outcomes and possible motives, expressed as a type of ignorative perspective, are listed in table 1.

2.3.5 *Questions Defined*. In 2.3.1 I proposed domains of specification as a general term for aspects of the world that we use language to give information on. In 2.3.3 I argued that domains of specification enter into conversations *inter alia* as topical domains, or dialogue topics, and thus to some extent account for what conversations can be said to be about. In the preceding section, finally, I showed that questions occur also outside of question-answer dialogues, but that the environments where questions occur share the property that one or more agents have, or adopt, what was termed an ignorative perspective towards some domain of specification, and act interrogatively, i.e. act so as to possibly obtain a specification of that domain. We may summarize this in the following definition:

- (72) A *question* is a domain of specification which is (a) perceived from an ignorative perspective, and (b) considered as a target of specification.

This definition contains some expressions that are deliberately vague, but so is the notion of a question. For example, it is not always clear whether the domains expressed by rhetorical questions are questions or not. However, I would say that if a domain is presented ignoratively, that is evidence that it is also looked at from an ignorative perspective, although there may be other conflicting evidence from the context of the utterance. Therefore, many rhetorical questions can be regarded as proper questions not only on the grounds of their structure. On the other hand, the various domains that are specified during a narration are not questions according to the given definition, in any case not for that reason. They are of course targets of specification for the narrator, but they are not looked at ignoratively and not presented ignoratively, either.

How does this characterization of questions as conceptual objects relate to the communicative act of asking a question? Previously, in (14), I characterized questions as communicative acts with reference to topics. In this section I have characterized topics as topical domains of specification, so we can now reformulate (14) in terms of domains of specifications, as follows:

- (14')
- i. S has introduced a domain, D, as topic;
 - ii. S has not specified D;
 - iii. (a) R has been given the task to search for an appropriate specification of D,
and (typically) (b) the task to provide S with that specification.

From this it follows that D is a question according to the definition (72), at least in so far as the ignorative presentation of D, stated in (14'ii), warrants the conclusion that the ignorative perspective is real and not pretended.

3. QUESTIONS AND CONTEXT.

Whether an utterance can be interpreted as a question or not depends not only on the words and constructions used, but also on the context. In this chapter I will say what the most important of these contextual factors are. Before, in 2.2.3, I have already stressed the importance of contextual factors for judging the function of a question (or other speech act), but here the focus is on the very appropriateness of a question interpretation. An interpreter must find out whether the speaker is introducing a topical domain in an appropriate mode, and in that case what its basis and domain concept are. He must also find out whether the speaker is indicating that some listener is to find an answer, and in that case who is indicated. In 3.2 and 3.3 I will also say something about how we can represent contextual factors in an integrated model of utterance interpretation.

3.1 Contextual Factors of Importance.

The following factors can be shown to be of importance for the interpretation of an utterance as a question:

- * the purposes and goals of the current activity,
- * participants' roles,
- * participants' cognitive territories and actual knowledge,
- * current topics and goals of the conversation.

More appropriately we should say that it is the interpreter's understanding of these matters that are important for his interpretation. In what follows I will assume, however, that participants have a common understanding of them.

The first two of these factors are crucial properties of activities. They can therefore be considered aspects of the interpreter's categorization of the ongoing activity. Other factors are restricted to a certain phase of the activity, e.g., the current topics and goals, whereas a factor such as participants' actual knowledge is independent of activity, but instead residing in the individual actor. Normally it is not the factors themselves that determine an interpretation, but the different ways in which they relate to the expressed domain of specification. Let us consider some examples.

Coulthard (1977) discusses the case of (1) uttered by the teacher in the course of a lesson.

- (1) T: What are you laughing at?
P: Nothing.

In a class-room this utterance would normally be interpreted as a command to stop laughing. Coulthard explains this interpretation with reference to a rule which says that any declarative or interrogative that makes reference to an action that is proscribed at the time of the utterance can be interpreted as a command to stop. However, this rule does not explain why the utterance is responded to in the way it is. In fact, it seems that P provides a specification of an introduced topical domain, although that specification is maximally uninformative. Thus, apart from the inappropriateness of P's behaviour in class there is also a conflict between the expressed domain (the cause of P's laughter), and the purpose of the activity (the teaching of some subject-matter), which makes it unlikely that the domain should be taken as a topic for further talk. In that sense the utterance is deviant from prototypical questions. The answer *Nothing* is an expression of the pupil's understanding that this is so, and perhaps also as a plea that it remain so. (An even stronger interpretation is that it amounts to a confession that there was nothing happening that could justify the laughter).

A slightly different example is the following, which shows the importance of roles and cognitive territories. It comes from the same recording of the program *Naturvåktarna* as a previous example (cf. note 1, p. 34). In this case a listener ringing in has given a fairly long-winded account of how a swarm of wasps invaded his house on a September evening. P, who is the chairman of the panel, makes a few *mhmss* and comments in between. The final part of the narration, which leads up to the question goes as follows:

- (2)
P1: dom var så dåsiga så dom, dom tog inte till vingarna inte?
C1: endast enstaka flög omkring, sen upprepades det hela efter ungefär tre veckor men nu var dom, nu var det inte fullt så många, men istället så var dom pigga å flertalet flög då omkring, å det var betydligt besvärligare att få ut dom.
P2: mm (p) vad skulle dom inne å göra.
C2: ja, vad skulle dom inne å göra?

P1: *They were so drowsy they didn't fly did, right?*
C1: *Only a few did, then the same thing happened again about three weeks later, but now they were, now there weren't as many, but instead they were quite lively and most of them were flying around, and it was much more difficult to get them out.*
P2: mm (p) *what were they up to inside?*
C2: *Yes, what were they up to inside?*

Ps first utterance in this sequence is a proper question, but the interesting case is his last utterance. It can only be taken as an attempt to express the question that has been hanging in the air for quite a long time, perhaps also as a request for

confirmation that this is the matter C wants to raise. Although P manages to install a definite topical domain for the conversation, the addressee is not picked out as an answerer, and we can not say that P is asking a question here; he is establishing a topical domain. The nature of the expressed domain reveals it as one which only the experts should answer, and therefore it cannot be directed to C.

By the *cognitive territory* of a participant I mean the domains for which that participant has the right to determine which specifications are appropriate. This notion is suggested as an improvement of the notion of A-event proposed by Labov (1972) and elaborated upon by Labov&Fanshel (1977). In the latter work five different kinds of "events" are recognized (ibid., p. 100):

- * A-events: Events known to A, but not to B.
- * B-events: Events known to B, but not to A.
- * AB-events: Events known to both A and B.
- * C-events: Events known to everyone present.
- * D-events: Events known to be disputable.

This taxonomy is quite fundamental, but it is infelicitously defined. First of all, it is not clear what the word 'event' encompasses in this context and, second, it is not so much what participants actually know that is relevant, it is their right to determine what specifications are correct with respect to a domain. It may be that a student in a class knows the answer to a problem which the teacher does not. Still, if the problem is part of the subject of the lesson, it is the teacher that sanctions suggested answers in view of his cognitive territory.

Also, D-events are not a different category from AB-events, but rather a subcategory. Disagreement brings in a different dimension which should be kept separate from cognitive territory. The taxonomy, rephrased in terms of cognitive territories and domains, comes out as follows:

- * A-domain: A domain in the speaker's cognitive territory,
- * B-domain: A domain in the addressee's cognitive territory,
- * AB-domain: A domain in the cognitive territories of both participants,

The most famous application of the contextual status of domains is probably Labov's Rule of Confirmation (Labov&Fanshel, ibid., p. 100), which I prefer to state as follows: If A in an utterance specifies a B-domain, then that utterance is heard as a request for confirmation. In other words, even if it has declarative form, it is heard as a question. Examples are numerous, but we may take the following one as an illustration:

(3)

P: du e inte ensam hemma¹

C: jodå, nä menar ja, de e ja inte, ja har ett helt gäng här me tjejer som väntar

P: *You are not alone at home*

C: *Well yes, I mean no, I'm not, I have a gang of girls here waiting*

Often, the questions that rely on this kind of contextual knowledge, express domains that the addressee cannot fail to know the answer to. From the point of view of the speaker this ensures that there will be no misunderstanding and so he is able to express his beliefs as regards the proper specification if he wants to, i.e. he can show the addressee what he already knows, or thinks he knows, and thus make the task of answering simpler.

The function of a question is strongly correlated with the contextual status of its topical domain. Training questions, examination questions, quiz show questions and attention-getting questions have A-domains, greeting questions and some information questions have B-domains, whereas other information questions along with talk-initiating questions, rhetorical questions and joking questions have AB-domains. AB-domains are also often the subject of a discussion or decision.

Let me then illustrate the importance of current topics. When a topical domain has been introduced, new topical domains (as well as specifications) may be introduced by means of expressions that make explicit or implicit reference to that topic. This can happen in different ways. An expression may substitute for something in the current basis, as in (4), it may substitute a new domain concept for the current one, as in (5), or it may introduce a new domain concept to be attached to the current basis, as in (6):

- | | | |
|------|-------------------------------|-------------------------------|
| (4a) | -När slutar du i morgon? | -When do you finish tomorrow? |
| | -Fyra. | -At four. |
| | -Å i övermorgon? | -And the day after tomorrow? |
| (4b) | -Jag har en present till dig. | -I have a present for you. |
| | -Vad då? | -What? |
| (5) | -Vad har du för adress? | -What's your address? |
| | -Almgatan 1. | -No 1, Elm Street. |
| | -Telefon? | -Phone number? |
| (6) | -Jag ska träffa Hasse. | -I'm going to see H. |
| | -När då? | -When? |

¹ - - - -

From the ring-in programme *Ring så spelar vi*, 1980-10-11.

Thus, without knowledge of the current topical domain, the topical domain of questions such as these can not be understood. In fact, this holds also for many questions whose vehicles are complete sentences, although then the relevant aspects of the current topical domain are referred to anaphorically, or repeated. It is only in the opening of a dialogue, or when an utterance is explicitly marked as changing topical domain by phrases such as *apropå det, från det ena till det andra* (by the way) or *en annan sak* (something else), that the current topical domain need not be invoked.

What topics can be introduced and spoken about depends not only on current topics and their possible extensions, but also on current goals and possibilities. In fact, a topic can usually not be established without there being a point in raising it. Consider the following simple dialogue.

- (7) A: Vet du var saluhallen ligger?
 B: Vet du var Domkyrkan ligger?
 A: Ja.
- A: *Do you know where the market-hall is?*
 B: *Do you know where the Cathedral is?*
 A: *Yes.*

A's initial utterance may be interpreted in different ways. In particular, it can be interpreted as introducing one or both of the following two domains: (a) B's knowledge about the location of the market-hall, and (b) the location of the market-hall. Which of these domains B should choose to speak about depends on how A's utterance can be construed as a means to fulfil a goal. If A is a stranger on the street, a goal that can plausibly be assigned to A is a wish to know where the market-hall is, which in turn can be seen as a sub-goal in order to get there. Now, if B assigns these goals to A and decides to cooperate, he cannot simply answer *Yes*. Although that would be to answer a question that can be attributed to A, it would not forward A's goals and hence be insufficient. A task that B should take upon himself is instead to provide information on the second domain (if he can), i.e. to tell A where the market-hall is.

B's utterance has exactly the same form as A's. On the basis of its form it may be taken to introduce one or both of the following two domains into the discourse: (c) A's knowledge of the location of the Cathedral, and (d) the location of the Cathedral. Its context is different, however. B's goal in this context cannot be construed as wanting to know where the Cathedral is, rather, it must be construed as wanting to explain the location of the market-hall to A. The latter domain has thus been accepted as a topic, while the domain (a) has been removed from the list of current topics. Of course, B's utterance does not relate directly to domain (b), but it is interpreted under the assumption that this domain is in force as a topic. Relating the utterance instead to B's present goals A can understand that B needs to know what A knows about the local geography in order to formulate a useful explanation. This means that for A it is appropriate to answer by a simple *Yes*, thereby attending only to domain (c) as topic

and disregarding domain (d). Thus it should be seen that participants' choices of topic, and consequently, their interpretation of utterances as questions about this or that domain, depends on interpretation of goals.

The possibilities of interpretation induced by a context have different sources. I have shown the importance of current goals and current domains. Another source, which is interdependent with these two, is the sequential organization of discourse, (Schegloff, 1976).

A problem with context is that it seems so much less structured than the utterance itself and that it contains such a mass of information that we also have a problem with selection. In short, in what form is contextual information available to the interpreter and how does he know which aspects of the context to make use of? These puzzles will not be answered here, but in the next section I will outline a model of interpretation that at least incorporates some contextual factors in the process of interpretation.

3.2 On Representing Context.

I have so far not made any attempt to define context. I use this term roughly as referring to the totality of objects and relations which, at any occasion when an utterance is being interpreted, is not part of the meaningful expressions and relations of the utterance. Obviously only a small subset of these will be relevant, depending on the utterance and the interests of the interpreter. It has been proposed that one can keep a finite list of the relevant factors, a set of *contextual coordinates* (Lewis, 1972), at least if one restricts oneself to determine extensions of linguistic expressions. Against this Cresswell (1973) argues that there can be no such finite list, as most aspects of reality can come to be used as points of reference, e.g., a country coordinate is needed for a sentence such as *They are playing the National Anthem*, a religion coordinate for *The gods are angry* and a 'previous drinks'-coordinate for *Just fetch your Jim another quart* (ibid., p. 111).

Cresswell's alternative is to regard a context, or a context-of-use as he calls it, as a property of utterances. Utterances have properties such as being uttered by some speaker, being uttered at a particular time and location and being addressed to some specific person. The interpretation (for Cresswell: meaning) of the utterance will then depend on its properties. The nice thing about this approach is that the number of contextual factors that are needed for the interpretation of any given utterance is finite, whereas the totality of contextual factors can still be regarded as infinite.

Although I think Cresswell is right on this point, we must also recognize that there are contextual factors which are almost always relevant, e.g., who the speaker is and what the topical domain is. This is especially so if we do not restrict ourselves to determine extensions, but consider other aspects of interpretation too, such as illocutionary force.

My proposal is therefore to keep a list of those factors that are always, or almost always, relevant, while allowing other factors to come into the picture as they are needed.

A different way to account for context is to focus on the beliefs of the participants in a conversation. Hamblin (1971) introduces what he calls 'commitment-slates', regarding them as sets of propositions that a participant is committed to. It would seem that this way to account for context is directed to a different aspect of interpretation than the one just considered, namely, the inferences that a participant is prepared to make on the basis of what he is told. Gazdar (1979) also uses it, with some success, to account for implicature and presupposition. But it is also relevant for the interpretation of illocutionary force; if I believe something and believe that the speaker also believes the same thing, an utterance directed to me in interrogative form on that topic is likely to be interpreted differently from one addressing a topic on which I have no belief, but a belief that the speaker believes something. Kiefer (1981) has actually proposed a taxonomy for questions on the basis of such differences.

As Gazdar (1981) points out, there is a way of getting at the common ground of participants through commitment-slates. The common ground, or shared view of the world, is simply the intersection of the commitment-slates of the participants. However, if this intersection is to be possible, we have to assume that the commitment-slates of different participants are expressed in the same terms, i.e. that they are objective and comparable entities. But, if this is so, we might just as well express the common ground in objective terms from the beginning, without the detour around participants' beliefs. The common ground is likely to encompass the ubiquitous contextual factors such as speaker-identity etc., even though they also may occasionally be subject to dispute. Therefore, I don't see much point in subordinating these factors under participants' beliefs, especially as they are likely to be forgotten in short time, but would rather separate them out from the beliefs and attitudes that are truly individual.

A similar model of context, although more principled and more developed, is given by Carlson (1983). For him a context is a *dialogue game situation*, i.e. a set of model sets (sets of propositions), which represents what participants of a dialogue game have on their minds at a given stage of the game. The reason for using a set of model sets rather than a single model set is that Carlson uses a possible world semantics to account for modality. A participant's beliefs are thus treated as a set of alternatives. Those propositions that a participant believes to be true will be in the intersection of all the model sets that are alternatives for that participant, whereas those propositions that are believed to be possible will occur only in some alternatives.

The model sets, as well as many other aspects of the theory, Carlson has taken over from Hintikka (cf. e.g., Hintikka, 1969). Carlson's model sets differ from Hintikka's in two significant respects, however. They need not be logically consistent and they may contain questions. Logical consistency is something that must not be taken for

granted; it is not unusual that we have inconsistent beliefs. Rather it is a goal of the participants of a dialogue to keep their alternatives consistent. Thus, as Carlson puts it, he is happy to get rid of a logic as long as he has a semantics. The reason for including questions in model sets is that questions are very important in the games Carlson considers. Their most important role is to define the dialogue topic, the problem that the participants want information on (cf. 2.3.3.3). What one wonders then is what it can mean for a question to be believed and how questions enter into semantic relations with propositions. Before I attend to these problems, I will need to say something about the notion of a dialogue game since that is, after all, the notion that is central to Carlson's theory.

Dialogue games are theoretical constructs that are aimed at answering what Carlson considers to be the fundamental problem of discourse analysis, namely, what makes discourse coherent. Given dialogue games the solution to that problem can be stated simply as follows: a discourse is coherent if it can be extended into a well-formed dialogue game. The idea of using games as models of discourse is of course not a novel one, but Carlson makes very good use of it. For him, the essential advantage of the game metaphor is that it stresses the goal-directedness of language use. Dialogue is not just the performance of various moves in a sequence; it has an internal aim, or rule of winning, as he puts it.

The dialogue games that Carlson considers are cooperative activities of information exchange. This entails that the following two maxims are adhered to:

- (a) *The maxim of agreement*: One of the internal aims of the dialogue is achieving a common understanding among the participants.
- (b) *The maxim of information*: The participants of the dialogue are interested in some problem or *topic* and they will do their best to satisfy their curiosity with respect to that topic.

Only so called *real* topics are considered, which means that answers should be true and complete. These restrictions delimit the class of dialogues that are considered, e.g., argumentations, greetings and riddles are excluded, but still Carlson manages to get surprisingly much out of his approach. Its nicest feature is that the properties of individual speech acts can be explained with reference to the general properties of the dialogue game and the existence of different strategies to achieve its goals. Thus, many uses of questions can be taken as the realization of a particular strategy to get or give information. For example, you may use a question to answer an already given question, as in (10) (from Carlson, *ibid.*, p. 113; cf. also (15) of 2.2.5):

- (10) A: Who is the murderer?
- B: Who wore square-toed boots?

When the aims and norms of a dialogue game are fixed globally the rules for what counts as a valid contribution to the dialogue become extremely simple. The first rule is the following:

(D.say) Any player may put forward any sentence.

It should be noted that the only sentences that are considered are questions and statements. When a player has initiated a game according to this rule, what can follow is determined by the maxims given above and rules of turn-taking. Certain of the possible strategies will develop into conventions, however, and Carlson therefore recognizes a set of what he calls *derived rules*. These specify common types of moves and counter-moves, such as the following:

(D.ask) Any player may ask any player a sentential (polarity) question.

(D.question) When a player has put forward the presupposition of a question, any player may ask him the question.

(D.answer) When a player has put forward a question, an addressee may put forward an answer to it.

The first rule allows for one way of initiating a dialogue. This rule does not cover x-questions, as these require stronger presuppositions and are treated as continuation moves. This may seem odd, but is explained by the fact that Nature in Carlson's theory serves as a participant. Nature represents the real world and the maxim of agreement can be expressed in the shorter slogan *Try to agree with Nature!*

One important thing to note about these rules is that nothing is said about why one should ask or answer questions. Such matters constitute external aims and are completely irrelevant to the internal working of dialogue game. Another important matter is how we recognize questions and answers in a dialogue game. On this matter Carlson idealizes considerably; questions are identified from their form and answers are identified from both their form and their content in relation to a preceding question. This idealization makes it quite unproblematic for Carlson what it means to ask a question. It means simply to put forward a sentence of the appropriate form and we are supposed to have a semantics at our disposal that determines an interpretation of that sentence.

This brings us back to the model sets that give a picture of what players believe at a certain stage of the dialogue game. In fact, Carlson does not talk about believing at all. He talks about *accepting* sentences, with the definition that a participant P accepts a sentence S at some alternative A if and only if S is included in the intersection of P's epistemic alternatives at A (p. 18). To accept a question means to accept it as a dialogue topic, i.e. as a question that should be answered in the dialogue. To reject a question, i.e. to deny it, is to be disinterested in it, something which Carlson expresses by means of the prefix *Never mind*. Thus, if I don't accept (11), I accept its contrary (12):

- (11) Who won?
- (12) Never mind who won.

Questions also enter into logical relations of explanation and inference. Generally speaking complex questions are explained (interpreted) with reference to simpler questions. The most simple question is *the elementary question*, which is a nexus question in interrogative form with only one possible answer, namely its declarative counterpart. (13a) and (14a) are examples of elementary questions with the corresponding answers (13b) and (14b):

- (13a) Did A win?
- (13b) A won. / A did win.

- (14a) Did A not win?
- (14b) A did not win.

One is inclined to ask at this point whether there are questions that admit of only one answer. Apparently there are. Bolinger (1978) has given a host of such examples and Carlson adds some more of his own. As illustrations consider two following different types (from Bolinger). The first, (15), is the questioning of a self-evident fact, and the other, (16), a question that almost ritually constitutes a signal to start some activity:

- (15) Are you still around?
- (16) OK, is everybody ready?

Still, what Carlson allows himself to do here is interpret a pragmatic fact as a semantic fact, i.e. the fact that a question admits of only one answer in a specific context is regarded as a property of the question vehicle. It is of course possible to employ elementary questions in one's semantics, but they can hardly be motivated in the way Carlson does. In Carlson's semantics they are primitives, but in reality they are, if not uncommon, not typical and are probably best viewed as strategical devices, just as the other kinds of question that Carlson considers.

A negative consequence of the introduction of elementary questions is that sentences such as (13a) become ambiguous. This does not correspond to people's intuitions about such sentences and also complicates the logical machinery which is necessary to handle them in the semantics.

This problem is in fact very significant for Carlson's approach, which relies on the assumption that language is uniform. In particular, he identifies the vehicles of communication, the language used in dialogues, with the language used for the representations of ideas. He even goes as far as saying that thinking is internal dialogue. Although he does not go as far as saying that the meaning of an utterance is identical to the meaning of the expression used, he tries to restrict the possible deviations as far as possible with an appeal to *meaning conventions*. A meaning

convention is a rule which allows us to infer from the words that a speaker utters his position on the topic of the dialogue. The basic meaning convention is called D.earnest:

(D.earnest) Put forward a sentence only if you accept it.

Thus, if we take a declarative statement to be uttered under this meaning convention, we can infer that the speaker holds it true, and if a question is uttered under it, we can infer that the speaker is really interested in it as a topic. There are alternative meaning conventions, however:

(D.guess) Put forward a sentence only if you admit it.

(D.irony) Put forward a sentence only if you accept its contrary.

D.guess is regarded as a marked option which requires a disambiguating context and which usually is marked in some way in the utterance too. It allows one to say something which is only possibly true. Note that it also allows one to ask a question which one is only possibly interested in, whatever that means. Also the irony convention seems difficult to apply to questions, but it is actually used to derive interpretations of (certain) rhetorical questions. A case in point is (17):

(17) A: What will Jack say?
 B: Who cares?

We may interpret B's utterance as saying that whatever Jack will say is not worthy of attention and that, therefore, the matter had better be dropped. Carlson derives this interpretation by first invoking the irony convention, which yields the statement *Never mind who cares what Jack will say*. This implies, among other things, that other, more specific questions should also be ignored, e.g., the following:

- Never mind if A cares what Jack will say if A does care what Jack will say.
- Never mind if B cares what Jack will say if B does care what Jack will say.

Since A obviously cares (otherwise he would not have asked the question in earnest) B must accept 'Never mind if A cares what Jack will say', i.e. B must simply not be interested if A (or anyone else for that part) cares. The second implication leads most likely to the conclusion that B does not care what Jack will say, since, if he did, it would follow that he would not be interested in his own concerns, which is unlikely. Thus, the conclusion is that B does not care what Jack says and does not care if anyone else does.

A slightly different example, where the reasons for not accepting the question is attributed to presupposition failure, is (18):

(18) What do I know?

Since (18) is unlikely to be asked in earnest, we should take it as being asked according to the irony convention. This gives the straight-forward interpretation 'Never mind what I know'. So, why is the speaker not accepting this question? According to Carlson, the likeliest reason is presupposition failure; there is nothing that the speaker knows about the topic, and this is also the message that is conveyed.

To me there is something roundabout and far-fetched about these derivations. First of all, many serious questions accept and sometimes even expect negative answers. One example is (19):

(19) A: What did Jack say (if anything)?

B: He said nothing.

It is doubtful in this case if we even can talk of a presupposition failure. The basis of the question need not be 'Jack said something' but rather 'Jack reacted in some way' for which not saying or not communicating anything is as significant a reaction as any. Thus, to invoke a presupposition in the derivation of an interpretation of (18) is a move more motivated by literalism than by anything else. Moreover, there is a more direct way to reach these interpretations if we consider the topical domains that the questions (17B) and (18) introduce, which is comparable to the way in which (10B) succeeds in being an answer. With the question *What do I know?* the speaker asks the addressee to consider what knowledge he, the speaker, may have on the topic at hand. It is a typical trait of this kind of rhetorical question that the answer should be known or computable, and it is also typical that the answer is a negative one, so typical that we may talk of this class as a specific, recognizable subclass of rhetorical questions. Thus, A can directly reach the conclusion that B does not know anything. He can also reach the conclusion that he ought to have known this already, since otherwise B would have told A that he did not know. Note that the rhetorical question (18), unlike the reply *I don't know*, conveys a negative evaluation of the question; it should not have been asked. If A had considered the topic that B's question raises it would not have been asked either.

The question *Who cares?* works similarly, although the situation is slightly more complicated since A obviously cares. Carlson says that this fact makes an interpretation roughly equivalent to *No one cares* impossible. But this also seems to me an effect of misguided literalism as an utterance of (20) is perfectly acceptable.

(20) No one cares so why should you?

Therefore, B's question should directly suggest to A that he is the only one who cares, and again the question format functions as a snub; A should have thought about this before he asked.

It is also fair to say that the irony convention, as it stands, does not say very much about ironic statements either. It can only be invoked in case the contrary is obviously valid. Moreover, ironical comments, being evaluative in their nature, usually contain words with a positive connotation, such as *great*, *smart*, *honest*, etc. It seems to be easier to use a positive word ironically than to give credit by the use of negatively evaluating words, such as *lousy*, *dumb* or *dishonest*.

Carlson's aim of having a unified theory of dialogue games and semantics is perhaps most clearly manifested in his use of the term 'accept'. The notion of accepting a dialogue topic is conflated with the notion of accepting a statement as true. This is possible because of Carlson's decision to take questions as the standard expressions for dialogue topics. But there are several reasons why these two notions of acceptance should be kept apart. One is that there is a kind of pragmatic acceptance of statements which is on a par with the acceptance of topics, namely to accept them as valid and relevant contributions to the dialogue, although, unfortunately, not true. That is, they are accepted as utterances but not as facts (cf. Dahl, 1977b). Another is that by equating topics with questions, Carlson can not make a distinction between current topics of a dialogue and questions that are answerable. When a question has been answered in a dialogue it is usually dropped as a topic and should be removed from the sentences that players accept. But acceptance in Carlson's view is a durable property; Nature does not change her truths. Third, as remarked in 2.3.3.3 by defining topics in terms of questions, we have no way of accounting for the difference between a topic as a real entity being in the focus of attention, and a question as an act, communicative or mental, that directs our attention to that topic.

3.3 A Context Representation.

It would seem preferable to have a notion of context which is grounded in a superordinate theory of conversation, as Carlson has. Instead of amending Carlson's dialogue games by including my own notion of topic, or working out a different model, I will, however, be satisfied with a less developed, more ad hoc notion. My reason for this is that, by doing so, I can avoid taking a stand on a number of issues which are beyond the scope of this investigation. There is a risk, too, of course, that a number of generalizations will be missed.

An essential feature of context is that it is constantly changing. Some of these changes can be regarded as affecting a specific contextual factor, which, at any given moment, has a specific value. An example of such a factor is the speaker factor. At any one moment of a dialogue there is some participant who acts as speaker. Two or more people can act as speakers simultaneously only if they act in tandem, otherwise we no longer have one conversation. If different persons adopt the speaker role with different intentions there will be a conflict which has to be resolved somehow (Coulthard, 1977; Sacks et al. 1974). Moreover, the speaker factor must constantly be attended to by all

the participants of the conversation.

On the other hand, there are contextual factors that are only potentially relevant, which we need not constantly have in mind, but only attend to if we are prompted to by something said or done. World knowledge, or background knowledge, is a factor of this kind. Of course we may say that if we learn something new in the course of a conversation we add that piece of knowledge to our general store, but this store is not activated as a whole. Rather, changes to our general world knowledge are made incrementally.

I now want to single out some contextual factors that are of the first kind, i.e. they must constantly be attended to by the participants, and they either have one value or a set of compatible values. First we have the current speaker and addressee. They should be identified and also assigned a role-label, appropriate to the dialogue. Then we have the current themes: the objects and events that are being talked about, and the current topical domains. These should be described, ordered and assigned indices for cognitive territory and dialogue status. By dialogue status is meant the status of a topic as open or closed. A current topic can also be indexed for current specifications, i.e. those specifications that have been accepted, or are at issue, for that domain. Finally, we have the current goals of the dialogue. Some of these goals are goals to be achieved and can be characterized in terms of a relation between some participant and a topical domain, e.g., that participant A knows the true specification of topical domain D. Other goals are events or tasks to be performed in the dialogue. These can be characterized in terms of a specified action to be performed by some participant.

All other contextual factors will be regarded as subjective and as parts of individual participants' world models. A participant's world model represents his beliefs about the world and attitudes to it. I will not give any actual representations of world models, but only take note of changes made to them. Such changes will be expressed by means of ordinary sentences and as far as possible the representations I use will be termed in ordinary language.

Figure 1 shows a contextual representation along these lines, which will be referred to as a *Context structure*. Its format is that of a DAG, a structure of attribute-value pairs, where the attributes represent the factors that were just mentioned and the values are either atoms or DAGs themselves. Also an index can be given the form of an attribute-value pair as part of a DAG.

ATTRIBUTE	VALUE RANGE
SPEAKER	A token or description
ADDR	A token or description
THEMES	A list of tokens or descriptions
TOPICS	A list of domains, indexed with (a) Territorial status, (b) Dialogue status (c) Current specifications,
GOALS	A set of relations with agents
BELIEFS	Relevant parts of interpreter's knowledge

Figure 1: *Attributes of a Context Representation.*

4. SWEDISH INTERROGATIVE STRUCTURES

In this chapter I give a fairly comprehensive account of the interrogative structures of Swedish. By an *interrogative structure* I mean any type of expression that is recurrently and conventionally used to express a question, irrespective of whether the question is asked, posed or merely reported. By *convention* I mean a language-specific procedure which associates the expression with a question interpretation. I will also take note of the formal features that mark the expression as interrogative, which will be referred to as *interrogative features*. There are prosodic, syntactic and lexical features to account for, but only the last two types will be dealt with in any detail.

I do not assume that different interrogative structures are united syntactically through some overt or abstract properties, such as the Q-morpheme used in many transformational descriptions (cf. Katz & Postal, 1964; Wachowitz, 1978). What unites them is their function as expressing questions; we may even say their aptness for doing so. Functional identity does not necessarily entail formal similarity and, as we shall see in this and the following chapters, the Swedish interrogative structures express questions in quite different ways. The emphasis in this chapter is on the grammatical description of the interrogative structures, although I also take note of their different uses. In 4.1 I will present the grammatical framework I am using and take note of some basic facts about Swedish clause structure. In 4.2 a suitable organization of interrogative structures is proposed. In 4.3 the Swedish interrogative structures are described one by one, both structurally and functionally and, finally, in 4.4, the grammar used is summarized in compact form.

4.1 The Grammatical Framework.

Most interrogative structures are clauses and what identifies them as interrogative is a characteristic configuration of constituents. Not all relevant properties are syntactic, however. We have lexical as well as prosodic interrogative features. The written medium has an interrogative feature of its own, the question-mark. Although syntax, lexis and prosody may be regarded as separate dimensions, the interpretation of an utterance depends on the integrated structure resulting from choices made within all three dimensions. A structural description of an utterance which is to be related to its interpretation must therefore include all three aspects.

4.1.1 *Aims and General Outline.* The grammar I use is intended as a formal system of rules that account for the structure of (a subset of) utterances (tone-units) that can be met with in a dialogue between Swedish speakers. Naturally, there are a number of "performance phenomena" that I abstract from, such as false starts, hesitations, repetitions, etc., but the structural descriptions that the grammar provides respect the surface properties of utterances. Although I have tried to make the rules of the grammar as general as the facts admit — with some exceptions to be noted below — my aim as far as grammar is concerned is set at descriptive adequacy, the reason for this being that my primary interest is in the relation between structure and function, not structure and structure. Thus, I see the structural description of a given expression as a means for registering the grammatical options (lexical, structural, prosodic) that have been chosen in the construction of that expression.

This view of grammatical description is very much related to that of Systemic Grammar (Halliday, 1961, 1967; Winograd, 1972, 1983). I do not use the formalism of Systemic Grammar, however, but a transformation-free phrase structure grammar, which is inspired by the work within Generalized Phrase Structure Grammar (GPSG; Gazdar et al. 1985), but lacks some of the features of a GPSG, in particular its syntactic generality. In short, I attempt to integrate the functional view of language held by Systemic Grammar with the formalism developed by GPSG. A GPSG has a fairly immediate characterization in systemic terms; the features of GPSG correspond to the choice systems of Systemic grammar, the feature co-occurrence restrictions of GPSG correspond to the interdependencies expressed in system networks, the feature specification defaults to unmarked choices in choice systems and the context-free rewriting rules to realization rules, while the feature instantiating principles express generalizations across realization rules that are not normally expressed in a systemic grammar.

A structural description that is admitted by the grammar is called an *utterance-structure*, or *U-structure*, for short. It has the form of a phrase structure tree with complex node symbols, called *categories*. A category has the format of a feature matrix, i.e. a DAG where the attributes represent grammatical features (or choice systems) and the values represent choices within that system. Values can themselves be categories.

The top node of a U-structure, the U-node, is distinguished by having an attribute TONE. The values of TONE are atoms representing intonation, or, for written language, punctuation marks. The terminal nodes of a U-structure are distinguished by having an attribute STEM. The values of STEM are character strings that form the entries of a stem lexicon. Beside the stem lexicon the grammar also employs a lexicon of *lexemes*, whose entries are made up from the entries in the stem lexicon. Semantic information is restricted to the lexeme lexicon; the stems are considered formal building blocks of utterances, which are identified and linked to lexemes in the process of interpretation. Subcategorization properties are associated with lexemes rather than stems.

The choice of a particular value for an attribute is usually meaningful, i.e. it is likely to affect the interpretation of the expression in a certain way. However, there are interdependencies between values of different attributes, and between the values of one attribute and the presence or absence of other attributes. Such interdependencies are expressed in the feature co-occurrence restrictions. The interpretation of a value is generally influenced by its linguistic as well as situational context, but by studying the effects of choosing one value in contrast to one of its alternatives, it is possible to reveal regularities in what aspects of interpretation a given attribute is relevant for and the type of interpretations a given value supports.

Contextual interpretations are represented by a structure, called an I-structure, or Interpretation Structure. An I-structure is derived from a U-structure and a contextual representation by means of interpretation rules associated with values and entries in the lexeme lexicon, and general rules of interpretation. This is the topic of chapter 5.

The grammar employs rules of the following kinds (cf. Gazdar et al., 1985): Phrase Structure Rules and Rule Schemata, Feature Co-occurrence Restrictions (FCRs), Feature Specification Defaults (FSDs) and Instantiation Principles. The most substantial differences from a GPSG are the following:

(I) The use of the attributes TONE and STEM as described above.

(II) The grammar employs ordinary phrase structure rules, not the ID/LP-format. Gazdar et al. (ibid. p. 43f) proposes that natural languages have grammars meeting the property of exhaustive constant partial ordering (ECPO). In such grammars the order between two constituents that can appear as immediate daughters of the same constituent is either free or the same in all environments, i.e. the same independent of the kind of dominating constituent or the presence of other daughters. If this property holds of a context-free grammar, its rules can be separated into two classes, one pertaining to dominance relations (ID-rules) and the other pertaining to precedence relations (LP-rules). Although there are many generalizations to be made concerning precedence relations in Swedish, I do not believe that a grammar having the ECPO-property can be found for Swedish. We must at least allow Linear Precedence rules to be sensitive to features of the dominating node. The best illustration of the problems is probably given by the behaviour of complements to adjectives and participles in attributive and predicative AP's. In a predicative AP, such as the one of (1a), the complement must appear after the adjective, and in an attributive AP, such as (1c), it must precede the adjective.

(1a) En kycklinggryta lagad med stor omsorg.

(1b) *En kycklinggryta med stor omsorg lagad.
a chicken stew prepared with great care.

- (1c) En med stor omsorg lagad kycklinggryta.
(1d) *En lagad med stor omsorg kycklinggryta.
a carefully prepared chicken stew.

In the present grammar I have not tried to incorporate any generalizations concerning precedence relations in Swedish, only allowed for a notation, which makes it possible to state alternative orders in a convenient manner.

(III) I use no rule-to-rule semantics, as the purpose of my interpretation procedure is to represent certain aspects of interpretation in a context-of-utterance, for which I believe a "context-free" semantics is of little value. Also, the interpretation includes certain properties that go beyond (truth-conditional) semantics, e.g., information structure and modal properties.

(IV) I account for subcategorization in terms of grammatical functions, where the grammatical function of a constituent is indicated by a special descriptor with attribute GF. Thus, lexeme entries give information on the correspondence between semantic arguments and surface constituents in terms of category and function. The feature SUBCAT as used in GPSG is not employed.

(V) Heads are defined as constituents having the descriptor (GF Head). Thus, the property of being a head is treated on a par with the property of having a particular grammatical function. There is a Head Feature Convention that makes reference to this function, but which is otherwise quite similar to the HFC of GPSG.

(VI) The attribute SLASH is used in very much the same way as in GPSG. However, I do not use empty categories in the tree. Instead, "slashed" categories obey the same phrase structure rules as "non-slashed" categories. In the interpretation the value of SLASH for a constituent is regarded as being part of that constituent exactly as much as any expressed constituent which it dominates. Whether a constituent containing a SLASH is grammatical or not then depends on the lexeme it is associated with in the interpretation. A gap must always be seen in relation to a lexeme.

The interpretation given to SLASH is thus that something should be included in the interpretation of the constituent having that feature. This holds also in the case of resumptive pronouns, which, unlike 'gaps', correspond to obligatory constituents, such as subjects in Swedish. The analysis of resumptive pronouns adopted here is that they are pronouns that have incorporated the feature SLASH.¹ Their interpretation (referent) must then be compatible with two sets of descriptors, the ones appearing under PRO and the ones appearing under SLASH.

¹ Alternatively, a separate attribute could be employed for the cases that require resumptive pronouns. It would differ from SLASH in its behaviour wrt terminal nodes. SLASH would not be allowed to appear on a terminal node, whereas this other attribute would be required to be eliminated through a terminal node specified as a pronoun.

Since the values of attributes have to be unique my grammar can only handle constructions with a single gap, although Swedish accepts multiple gaps in embedded clause, as in (2) (see e.g. Engdahl, 1982):

- (2) Cykeln vet jag inte var han har ställt e e .
The-bike know I not where he has put e e .

It would be possible to account for multiple gaps by letting the value of SLASH be a feature matrix the attributes of which are numbers (or other, perhaps more meaningful labels) for which the values are categories corresponding to the category of the slashed constituent. Whenever a gap is introduced it is then provided with a number, one unit higher than the existing numbers, or, if there are no gaps, the number 1. Another possibility is to use different SLASH-attributes and let the attribute encode the position in which the extracted constituent is to be found. I will not supply the grammar with any such feature here, however, but be satisfied with a grammar that handles single gaps.

(VII) Syntactic categories such as N, V, A, P, etc. are regarded as primitives. Thus, they are not further analyzed into features as is common in GPSG and other models adopting the X-bar-format. Syntactic categories are given as values of the attribute CAT. The system defined by CAT is as follows, where the values stand for nouns, verbs, adjectives, prepositions, determiners, complementizers, coordinating conjunctions, sentence adverbs and adverbs modifying adjectives and/or adverbs, respectively.

CAT { N, V, A, P, DET, COMP, CONJ, SA, AA }

(VIII) Agreement is not handled in the same way as in a GPSG. In fact, agreement between predicative complements and other constituents is not handled at all.

4.1.2 *Utterances and tones.* As said above the expressions assigned structural descriptions by this grammar are unit utterances. For written language these units basically correspond to text-sentences (Lyons, 1977), with the punctuation mark regarded as an integral part of the sentence. For spoken language the borders between different utterances are not always so easy to ascertain, but I regard it as an essential property of an utterance unit that it has a particular "tone", or intonation type. Other prosodic features, such as sentence accent, are not given any representation.

I do not attempt any general characterization of prosodic interrogative features. The investigations that have been undertaken in this regard on Swedish (e.g., Gårding, 1979; Johansson, 1978; Bredvad-Jensen, 1980) suggest that the following features are significant:

- * overall higher pitch,
- * overall frequency rise,
- * wider pitch interval in connection with focus,
- * compression of prefocal and postfocal pitch contours,
- * terminal rise.

Five different intonations will be distinguished, a neutral, interrogative intonation with all or most of the features listed above, which will be represented by a question-mark (?), a marked interrogative intonation with the same features as well as prosodic markers of emotions such as surprise, joy, irritation, etc., designated (!?), an intonation marked by a terminal fall and a sentence accent, which will be designated by a full stop (.), and a more expressive variant of the same type, designated by an exclamation mark (!). The fifth intonation is marked by a terminal rise, or at least a non-falling pitch-level at the end, but none of the other features of the interrogative intonation. It will be used for such units that signal that more is to come and will be designated by a comma (,). Thus, the attribute TONE is associated with a system of five options:

TONE { ., ?, !, !?, , }

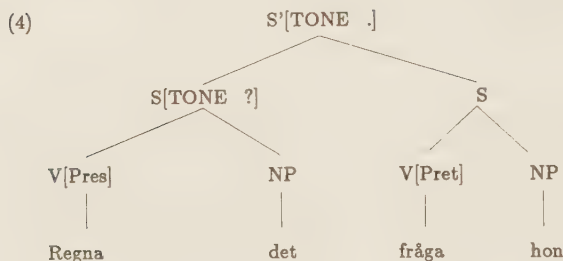
These signs are also used in some of the illustrations, both authentic and invented ones. In some illustrations focus, i.e. a word or phrase that carries a sentence accent, is marked by capitals.

Obviously this treatment of the prosodic interrogative features is much too simplistic. The assumptions I am making as far as intonation is concerned are (i) that intonation is one, and sometimes the only sign-feature that distinguishes a question from an assertion, (ii) that sentence intonation is a dimension of its own, which is largely independent of syntactic structure, i.e. it is possible to interpret a hummed expression, or distinguish between utterances that contain the same sequence of words, in terms of the categories proposed above (Johansson, 1978; Hadding, 1974). Conversely one can investigate syntactic and lexical features without recourse to intonation or other prosodic factors; (iii) that intonation applies globally to expressions which may vary in syntactic complexity. These assumptions seem to me quite uncontroversial. I submit, though, that the particular description I adopt here, is probably more adequate as a description of the system of punctuation marks, than of the intonational system.

Normally, tones are relevant only at the top level of a structural description with the implication that the tone has scope over the entire utterance. There are cases, however, where it is motivated to use utterance units also internally, such as direct speech:

(3) Regnar det?, frågade hon.

Is it raining, she asked.



Apart from a TONE specification and a major syntactic expression an utterance unit may contain initial elements, such as interjections, and tags. I will not go into a detailed description of such elements as regard their number and category. Certain interrogative tags will be discussed below, but mostly from the point of view of their function. In order to give them a place in U-structures I use the following rule (positional schema) for utterance units (cf. Andersson, 1984).

(0) U[TONE] --> (LC) (Z) (RC)

Here LC and RC indicate positions, LC the left corner, and RC the right corner of the unit. Z is an arbitrary category.

4.1.3 *Basic Features of Swedish Clause Structure.* The unmarked declarative clause in Swedish has SVO order, but there is an alternative order XVSO, where X can be almost any type of constituent. A characteristic trait of the main declarative clause in Swedish is thus that the verb appears in the second position. I will, following Scandinavian tradition, refer to the constituent of the initial position as the *foundation* (cf. Anward, 1982; Diderichsen, 1957).

If there is great variation in what can appear before the verb, there is more order in what can follow it. If the foundation is not subject, the subject usually follows immediately after the finite verb. However, there are other constituents that can precede it, such as the reflexive pronouns, the accusative personal pronouns and certain sentence adverbs, such as *inte*, 'not', *ofta*, 'often', *ju*, *väl* and *nog*, which are "speaker attitude adverbs" (Teleman, 1974). Some examples of this kind are given in (5), where the finite verb and the subject have been italicized.

(5a) Till sist *lät sig männen övertalas.*

(Reflexive)

Finally the men allowed themselves to be persuaded.

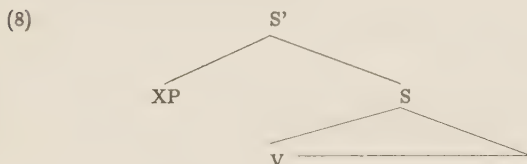
- (5b) På kvällen hände honom något kusligt. (Object Pronoun)
In the evening something uncanny happened to him.

- (5c) I så fall vill antagligen inte flickorna vara med. (Sentence Adverbs)
In that case the girls probably won't want to be in.

The number of constituents that can appear between the finite verb and the subject is thus quite small. Other constituents which have a close affinity to the verb, such as a verb particle or a non-pronominal object, can not, as shown by the following examples.

- (6) *Då gav upp Lillen matchen. *Then Lillen gave up the match.*
 (7) *Därför förlorade matchen Lillen. *That's why Lillen lost the match.*

Ignoring the foundation and looking at the constituents that follow it, they show more or less the same order as they have in a main interrogative clause. I therefore treat those constituents as forming a clause. The basic structure of a declarative clause is thus given by (8). Conversely, an interrogative clause can be said to differ from a declarative clause in not having a foundation.



The complements of a verb, with the exceptions noted above, appear after the subject, the sentence adverbs and the particle, if there is one. Non-complements generally appear after complements.

Main Wh-clauses differ from declarative clauses in having a Wh-phrase somewhere, typically in the foundation, as in (9). Their basic structure is also given by (8).

- (9a) Vilka flickor vill inte vara med? *Which girls don't want to be in?*
 (9b) När hände honom detta? *When did this happen to him?*

There is a basic distinction to be made between (constructionally) main and subordinate clauses in Swedish. Following Andersson (1975) I take the defining property of a subordinate clause to be the possible presence of a complementizer. Unmarked subordinate clauses also have a different word order from main clauses; the subject position is next to the complementizer position and sentence adverbs obligatorily appear before the finite verb, which is immediately followed by its

complements. Thus the subordinate clauses corresponding to (5a, c) are the following, where subjects and finite verbs again are italicized.

- (10a) att *männ*en till sist *lät* sig övertalas.
that the men finally allowed themselves to be persuaded.

- (10b) om *flick*orna inte *vill* vara med.
if the girls won't want to be in.

It has been noted that the structural similarity of main and subordinate clauses in Swedish and other verb-second languages can be accounted for nicely by identifying the complementizer position of the subordinate clause with the position of the finite verb in a main clause (see e.g. Platzack (1985) for discussion). In a transformational description the finite verb would move from its position in the VP to this position, giving the main clause structure, while this movement would be prevented in a subordinate clause by the presence of a complementizer. In a GPSG employing the ID/LP-format this generalization can be accounted for by noting (a) that simple verbs and complementizers have the same precedence properties, and (b) that simple verbs are direct descendants of main clauses but not of subordinate clauses, which instead have complementizers as direct descendants. As I do not state precedence properties explicitly in the present grammar, the property in (a) is only indirectly expressed in the phrase structure rules for main and subordinate clauses.

Subordinate Wh-clauses have an initial Wh-phrase, which may be followed by the word *som*. This *som* is obligatory if the Wh-phrase is a subject, but optional otherwise and often preferably omitted. The possibilities are illustrated in (11).

- (11a) Vi undrade vilka *som* inte ville vara med.
 lit. *We wondered who that not wanted to be in.*
 = *We wondered who didn't want to be in.*

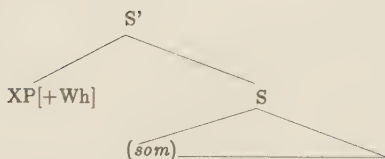
- (11b) *Vi undrade vilka inte ville vara med.
 lit. *We wondered who not wanted to be in.*

- (11c) Ta reda på vilka personer (*som*) han har talat med.
Find out which people (that) he has been talking to.

- (11d) Ingen visste när (?*som*) detta hade hänt.
No one knew when this had happened.

I analyze *som* as a complementizer which occupies the initial position of its clause (Andersson, 1975). The subordinate Wh-clause is assigned a parallel structure to that of a main Wh-clause with the Wh-phrase as a kind of foundation, leaving *som* alone in the COMP position.

(12)



Turning next to the features of the grammar, the most important attributes appearing in clausal categories are the following: CAT, BAR, SUBJ, RANK, VFORM, FIN, COMP and SFORM.

The syntactic category, CAT, has the same value, V, for all clauses. BAR indicates phrase level. I recognize four different levels represented by the numbers 0, 1, 2, 3. Level 0 is the level of simple words, whereas level 3 indicates the highest possible complexity. Level 3 is only used with clauses and indicates that the clause has a foundation. Clauses without foundation have level 2. Clauses without a position for sentence adverbs have level 1. This division is the same as in Anward (1982) with one important difference. I do not use phrase level to indicate the presence of a subject position. Instead I follow Gazdar et al. (ibid.) in using an attribute SUBJ for this. Its values are '+' or '-'.

RANK is used to distinguish main from subordinate clauses. It also has two values: Main and Sub.

VFORM indicates the inflection of the verb and has five different possible values: Pres(ent), Pret(erite), Imp(erative), Sup(ine) and Inf(initive). FIN indicates whether the clause is finite or infinitive. Finite clauses are either present or preterite.

COMP indicates what complementizer a clause takes. Only subordinate clauses take this attribute. The most common values of COMP are *att*, *att'*, *om*, *som*, *vad* and Nil. *Att* represents the complementizer of ordinary subject and object clauses (corresponding to English *that*) and *att'* the infinitive marker (corresponding to English *to*). *Om* is the complementizer of indirect nexus-questions and *som* the complementizer of relative clauses, Wh-clauses and certain other similar clauses. 'Nil' is used with subordinate clauses that do not have an overt complementizer.

The purpose of SFORM is to register syntactically and functionally distinct constituent configurations of clauses. It does not apply to subordinate clauses of BAR-value 2, which instead are distinguished by complementizers. Thus SFORM and COMP are incompatible. The most important values of SFORM are the following:

Decl(arative),
 Int(errogative),
 Imp(erative),
 WhI (Interrogative Wh-clause),²
 WhE (Exclamative Wh-clause),
 WhR (Relative Wh-clause),

As the values of SFORM to a large extent determine the topology of a clause, they figure in many of the rules for clauses. They are also part of many FCRs with values of the attributes RANK, BAR, FIN and VFORM.

SFORM is one attribute for which the chosen value is strongly correlated with illocutionary interpretation. But it is not the only one. The following are the attributes, and corresponding values, which are the most likely to indicate whether an utterance (or utterance part) is to be taken as a question or an assertion.

TONE, esp. ? vs. .

COMP, esp. *att* vs. *om*

SFORM, esp. Int vs. Decl vs. WhI.

The rules that realize clauses make particular reference to the syntactic category and grammatical function of a constituent. The latter are stated as values of a particular attribute, GF. The most important values of GF being used at clause level are the following:

Subj(ect)
 DObj (Direct object)
 Obj2 (Secondary object)
 Pred(icative)
 Head
 Foc(us)

The nominal functions Subject, Direct object and Secondary object are used also with complement clauses. Predicative is used with predicative NP's and AP's, as well as with infinitive VP's. Head is used with the constituent that is analyzed as the head of a projection. The head of a clause is a verbal projection of lower bar value than the clause itself. Focus is the function used with the foundation of a clause. It is required that two sister constituents cannot have the same value for grammatical function (see 4.4.4). Non-complement constituents are not required to carry the attribute GF. Nevertheless, the number of oblique and adverbial functions of the grammar is still

² - - - -

Later on, in chapter 6, this type of clause will be renamed Ignorative Wh-clause.

large. Oblique functions, of which little will be said, are correlated with the form and types of prepositions.

Two other attributes that are frequently used in the rules are SLASH and WH. Both of these take categories as values. SLASH is used to indicate a gap as explained above. WH is used with the same purpose as Gazdar et al. (ibid.). Any phrase containing a Wh-word carries the attribute WH and its value is a category which is appropriate for the word in question. Any phrase having the attribute WH also has the attribute WHM, which indicates whether the Wh-word is interrogative, exclamative, relative or whatever.

As categories are cumbersome to specify I will abbreviate categories as far as possible. The following abbreviations are used:

X:	$\begin{bmatrix} \text{CAT} & \text{X} \\ \text{BAR} & 0 \end{bmatrix}$	X':	$\begin{bmatrix} \text{CAT} & \text{X} \\ \text{BAR} & 1 \end{bmatrix}$
XP:	$\begin{bmatrix} \text{CAT} & \text{X} \\ \text{BAR} & 2 \end{bmatrix}$	VP:	$\begin{bmatrix} \text{CAT} & \text{V} \\ \text{BAR} & 2 \\ \text{SUBJ} & - \end{bmatrix}$
S:	$\begin{bmatrix} \text{CAT} & \text{V} \\ \text{BAR} & 2 \\ \text{SUBJ} & + \end{bmatrix}$	S':	$\begin{bmatrix} \text{CAT} & \text{V} \\ \text{BAR} & 3 \\ \text{SUBJ} & + \end{bmatrix}$

Note in particular the use of VP for a verbal projection lacking a subject and S for one with a subject.

I also use a number of other abbreviations. The following are the most important: In rules, I generally use lists of values instead of complete DAGs, where the context should make it clear what attributes are being specified. Binary attributes that have '+' and '-' as values are often specified '+Attr' or '-Attr', i.e. instead of [FIN +] I write '+Fin' in such value lists. This is in accordance with GPSG notational conventions. SLASH-values are indicated with a \$-sign. Thus, \$NP is used in a value list as an abbreviation for [SLASH NP]. Attributes such as WH may also occur in the lists with the intended interpretation that the category has some value for that attribute.

In rule schemata the symbol Z is used to indicate a category with arbitrary values of CAT and BAR. ' $\mathcal{G}$ ' is used as a variable over grammatical functions. The symbol '~' between two symbols means that the order between them is free. Some of the rules we

have so far discussed are stated below. More complete versions of the rules are given in 4.3 and 4.4.

- (1) $V' \rightarrow [\text{Head}] Z[\mathcal{G}\mathcal{F}]^*$
- (2a) $VP[\text{Main}] \rightarrow [\text{Head}] SA^* Z[\mathcal{G}\mathcal{F}]^*$
- (3a) $S[\text{Main}] \rightarrow [\text{Head}] NP[\text{Subj}] \sim SA^* Z[\mathcal{G}\mathcal{F}]^*$
- (3b) $S[\text{Sub}, c] \rightarrow \text{COMP}[c] S[\text{Sub}, \text{Nil}]$
where c is *att*, *om*, *som* or *vad*
- (3c) $S[\text{Sub}, \text{Nil}] \rightarrow NP[\text{Subj}] SA^* V'[\text{Head}]$
- (4a) $S'[\text{Main}, \text{Decl}] \rightarrow Z[\text{Foc}] S[\$Z, \text{Head}]$
- (5a) $S'[\text{Main}, \text{WhI}] \rightarrow Z[\text{WH}, \text{Q}, \text{Foc}] S[\$Z, \text{Head}]$
- (6a) $S'[\text{Sub}, \text{WhI}] \rightarrow Z[\text{WH}, \text{Q}, \text{Foc}] S[\$Z, \{som / \text{Nil}\}, \text{Head}]$

Feature Co-occurrence Restrictions are unidirectional ($\rightarrow$), or bidirectional ($\leftrightarrow$). As illustrations some of the FCRs that have been discussed in the text so far are given. A more complete set is given in 4.4.2.

- 1. $[\text{SFORM}] \leftrightarrow [\text{RANK Main}] \vee [\text{BAR 3}]$
- 2. $[\text{COMP}] \leftrightarrow [[\text{RANK Sub}] [\text{BAR 2}]]$
- 5. $[\text{FIN } +] \leftrightarrow [\text{VFORM } \{ \text{Pres}, \text{Pret} \}]$
- 6. $[\text{FIN } -] \leftrightarrow [\text{VFORM } \{ \text{Imp}, \text{Inf}, \text{Sup} \}]$
- 15. $[\text{WH}] \leftrightarrow [\text{WHM}]$

Other attributes, values and rules will be discussed in due time. The complete set of attributes with corresponding values is listed in 4.4.1.

4.2 A Classification of Interrogative Structures.

There are many ways of classifying questions. However, most, not to say all grammarians recognize two major types of questions, variously being called *general* and *special* (Sweet, 1891), *rogative* and *quesitive* (Noreen, 1904), *nexus-questions* and *x-questions* (Jespersen, 1933), *yes-no questions* and *how-why questions* (Bolinger, 1957), the latter type in recent literature being referred to as *wh-questions*. The distinction between these two types can be made both on formal and functional grounds, as it is manifested both in the kinds of element that occur in them and in the way they can be answered.

Given the notions of domain and specification the difference between the two types can be described as follows. With the first type a specification belonging to some domain is explicitly mentioned, thereby indicating this domain as the topical domain. With the second type no specification is mentioned for the relevant domain, which instead is indicated by some other means. The important difference is thus the presence vs. absence of a specifying expression of the domain of interest. This difference is not just a formal difference, but a functional difference too, as it affects the interpretation and the response possibilities. When a candidate specification is mentioned, the addressee may answer, or at least give as part of the answer, a *yes* or a *no*, indicating consent or dissent to that specification. When no specification is given, these answers are not possible.

I will refer to the two types with Jespersen's terms, since I find them the most appropriate. The crucial specification of the first type is always to be considered in relation to an expressed or contextually given basis, i.e. it is to be combined with other specifications to form a nexus. For the second type, where the specification is absent, we have, as Jespersen pointed out, a structure which much resembles an algebraic equation, and this motivates the term *x-question*.

Apart from these two major types of questions there is also a third type, usually called *alternative* or *disjunctive* question. This type can be characterized with reference to the fact that it contains a disjunction of two or more specifications for the same domain. Many have sought to assimilate alternative questions to nexus-questions as a kind of minor variant or extension (e.g., Noreen, *ibid.*; Jespersen, *ibid.*), or, the other way round, have analyzed the nexus-question as a particular kind of alternative question. In this latter analysis the alternatives are considered to be a proposition and its negation, although the negative alternative is usually not fully expressed. On formal grounds there is of course sufficient reason to treat alternative questions as a class of their own, but they also differ in function from nexus-questions. First of all they can not be answered by a simple *yes* or *no* and secondly they have definite differences in interpretation. There are many contexts in which a nexus-question and a corresponding polar alternative question are not interchangeable and this would be hard to explain if they were identical in meaning. Bolinger (1978) gives many illustrations of this fact and I will just mention a few of the cases he considers:

1. When an answer is suggested to a previous x-question, only a nexus-question is possible.

- Vad är det med dig, är du sur?
What's the matter, are you cross?

@Vad är det med dig, är du sur eller inte?
What is the matter with you, are you cross or not?

2. When a nexus-question is used as an indirect request or to suggest an action, it can not be replaced by an alternative question.

- Tar du med dig en flaska vin?
Will you bring a bottle of wine?

@Tar du med dig en flaska vin eller inte?
Will you bring a bottle of wine or not?

3. A polar, alternative question can be used to force an answer, typically a decision, from the addressee in a way which a nexus-question can not. A proper context for such a question would be when the addressee has kept the speaker waiting for a long time. The alternative question then signals that the speaker's patience has run out.

- Kommer du eller kommer du inte!?
Are you going to come or not!?

Other illustrations of the same difference have been given in 3.2.

Thus, alternative questions form a class of their own, which is distinct from the other two, yet constituting a kind of bridge between them (cf. Bäuerle, 1979). The polar, alternative questions are obviously close to nexus-questions and there are contexts in which the two are interchangeable, e.g., for the subordinate interrogative clauses in (13) and (14) it is hard to notice any difference in interpretation:

- (13) Vi vet inte om han kommer.
We don't know if he is coming.

- (14) Vi vet inte om han kommer eller inte.
We don't know if he is coming or not.

On the other hand an indefinite expression can be added at the end of the disjunction of an alternative question, as in (15). This is a signal that the speaker allows other alternatives than the ones he is explicitly mentioning and thus has the effect of turning

the question into an x-question. Conversely, what starts out as an x-question may be turned into an alternative question by the addition of a disjunction of alternative specifications, as in (16):

- (15) Har ni några redskap eller några grejer, har ni bollar eller ballonger
eller nånting sånt där?

*Do you use any equipment or any things, balls or balloons
or anything like that?*

- (16) Vad vill du ha, hundralappar eller tusenlappar?

How do you want it, in hundred-crown notes or thousand-crown notes?

Within these three major classes there are different subtypes. A nexus-question may or may not contain a tag, an x-question may employ a question word, but can also be formed without one, and so on. The details of this characterization will be left to the following section, but an outline of the taxonomy I use is given in table 2 on the next page.

4.3 The Interrogative Structures of Swedish.

4.3.1 *Nexus-questions.* We have defined a nexus-question as one in which a specification of a simultaneously expressed or tacitly assumed topical domain is explicitly provided by the speaker. This can happen mainly in four different ways. The specifying expression may be uttered as part of a main interrogative clause, as part of a main declarative clause, as part of a subordinate clause or as a free expression. I will consider each of these cases in turn.

4.3.1.1 *Main interrogative clauses.* A main, interrogative clause is characterized by having the verb in initial position and an expressed subject. Its obligatory descriptors are the following:

CAT	V
BAR	2
SUBJ	+
FIN	+
RANK	Main
SFORM	Int

When it occurs free as a question vehicle it generally has interrogative tone. Its realization is expressed by rule (3a) of the grammar. This rule applies to all main

I. NEXUS-QUESTIONS

1. Main interrogative clauses
 - a. Plain interrogative clauses
 - b. Modified interrogative clauses
 - i. Modifying tags
 - ii. Internal modification
 - c. Negative interrogative clauses
2. Main declarative clauses with marked intonation
 - a. Plain declarative clauses
 - b. Modified declarative clauses
 - i. Modifying tags
 - ii. Internal and initial modification
3. Suppressed nexus
4. Subordinate interrogative clauses (*om*-clauses)

II. ALTERNATIVE QUESTIONS

1. Ordinary alternative interrogative clauses
2. Polar alternative interrogative clauses

III. X-QUESTIONS

1. Main wh-clauses
 - a. Plain wh-clauses
 - b. Wh+indefinite clauses
 - c. Non-inverted wh-clauses
 - d. Infinitival wh-clauses
 - e. Multiple wh-clauses
2. Subordinate wh-clauses
3. Free (or Sluiced) Wh-phrases
4. Cut clauses
5. Interrogative NPs
 - a. Free interrogative NPs
 - b. Framed interrogative NPs
6. *vad&*- and *hur&*-clauses

Table 2. *A Taxonomy of Interrogative Structures.*

clauses with a subject, also those clauses that are part of a main clause with foundation. However, such clauses are not assigned the description [SFORM Int] as they are specified for SLASH. SLASH and 'Int' are incompatible according to the FCR (10).

(3a) S[Main] → [Head] NP[Subj] ~ (N[Pro, DObj]) ~ SA* Z[gʃ]*

10. [SFORM Int] → [[BAR 2] [SUBJ +] ~[SLASH]]

If there is no modification by other interrogative features we can call this clause type a *plain interrogative clause*. Some examples are given below.

- | | | |
|-------|---------------------------------|--|
| (17a) | Har du SEMESTER? | <i>Are you on HOLIDAY?</i> |
| (17b) | Kan det vara PELLE som har den? | <i>Could it be PELLE who's got it?</i> |
| (17c) | BOR han här? | <i>Does he LIVE here?</i> |
| (17d) | Drog sig John UR affären? | <i>Did John PULL OUT of the deal?</i> |

I take it that the focus points to a lexeme or a complex of lexemes, not just a single formative. For instance, in (17a) it is the specification *ha semester*, 'be on leave', which is at issue, not just the word *semester*. Its nearest contrasting specifications are *jobba, arbeta*, 'work, be working', *vara arbetslös*, 'be unemployed' and *plugga, studera*, 'go to school/college/etc.'. This domain concerns the socio-economic status of a member of the community in a very important respect, although there is no recognized domain concept for it.

Main interrogative clauses allow a restricted set of tags and adverbial modifiers. The most common tag in spoken Swedish is *eller*, 'or', pronounced with high, rising pitch. It may be tagged onto all the examples of (17). Its main function seems to be to underscore the interrogative nature of the utterance or at least make sure that a response will follow. It may be used even in a joking question, where a non-serious specification is suggested, but it sounds odd with a rhetorical question of the type (18), the function of which is to bring attention to a presupposed fact.

- (18) Har jag någonsin ljugit för dig?
Have I ever lied to you?

@Har jag någonsin ljugit för dig, eller?

Possible as tags are also the adverbs *kanske*, 'perhaps', *männe* and *männtro*, 'I wonder', and the verbal form *tro*, 'do you suppose'. The adverbs can occur internally in the clause, but *tro* cannot, as illustrated by (19)-(21).

- | | | |
|-------|----------------------|---|
| (19a) | Bor han HÄR, kanske? | <i>Does he live here, do you think?</i> |
| (19b) | Bor han kanske HÄR? | |

(20a) Bor han HÄR, *månne*?

Is this where he lives, I wonder?

(20b) Bor han *månne* HÄR?

(21a) Bor han HÄR, *tro*?

Is this where he lives, do you suppose?

(21b) *Bor han *tro* HÄR?

With declarative clauses *kanske* and *månne* can appear in initial position. See 4.3.1.2 for illustrations.

Månne, *männ**tro* and *tro* are different from *kanske* in being restricted to interrogative structures. *Kanske*, just as its English counterpart *perhaps*, is more commonly used to modify an assertion. Even when an interrogative clause is modified by *kanske*, it may have the force of an assertion, although a negative assertion. Thus, (22) would be used as an exasperated invitation to the addressee to deny the specification *full*, 'drunk' and would carry the implication that the speaker certainly takes it to be out of place.

(22) Skulle jag vara full *kanske*?

You are not saying that I'm drunk, are you?

@Skulle jag vara full, *månne*?

The most common internal adverbial modifier of an interrogative clause appears to be the negation, *inte*. As in many other languages the negation can imply a bias towards the mentioned specification when it is used in a nexus-question, and especially as part of an interrogative clause. Consider the following examples:

(23a) Behöver inte du gå och klippa dig?

Don't you need a hair-cut?

(23b) Har du inte glömt nånting?

Haven't you forgotten something?

(23c) Var dom inte fantastiska!?

Weren't they just great!?

The bias towards the mentioned specification may be more or less strong. Usually it is quite strong. In (23a) the speaker at least suggests that the addressee needs a hair-cut, and in (23b) the speaker is actually telling the addressee that he forgot something. (23c) finally, an exclamative utterance, is an outright expression of the speaker's views, which the speaker can not withdraw from, even if the addressee would turn out to have a different opinion.

We should distinguish this case of the negation occurring in an interrogative clause, where it is a modal feature associated with the specification from cases where it is already given in the context of the utterance. Two such cases are illustrated in (24) and (25):

(24) A: Han BOR inte här längre.

He doesn't live here anymore.

B: (Va?) BOR han inte här!?

What? Doesn't he live here!?

- (25) A: Han är inte nog KOMPETENT. *He is not competent enough.*
 B: (Va?) Är inte HAN kompetent!? *(What?) He not competent?*

In (24) B accepts what A is saying as true, but expresses surprise or shock at it. In (25) B does not accept what A is saying, but instead questions it. Both cases can be counted as echo-questions (nexus echo-questions), since the speaker repeats the very words that the previous speaker used as an immediate reaction to them, making a slight change of sentence-type from declarative to interrogative.

Exactly the same type of echo-questioning can occur with affirmative utterances, and that is why this case is different from the first. The negation has no part to play in the interpretation of the utterance as interrogative. (26) is exactly parallel with (24) and (27) with (25).

- (26) A: Han har flyttat till STOCKHOLM.
 B: (Va?) Har han flyttat till STOCKHOLM!?
 A: *He's moved to STOCKHOLM.*
 B: *(What?) Has he moved to STOCKHOLM!?*

- (27) A: Hon är för TJOCK. *She is too fat.*
 B: (Va?) Är HON tjock!? *(What?) She fat!?*

Although I think that we should distinguish the biasing negatives of (23) from the echoed negatives of (24) and (25), it is possible to see a connection between them. Both (23a) and (23b) can be regarded as reactions, not to an overt statement, but to a belief which can be imputed to the addressee, or generally, the actor concerned, on the basis of his behaviour. E.g., if someone was supposed to take some flowers with him as he was going out and he leaves without the flowers, (23b) is an appropriate question. It can be taken as questioning the beliefs of the person leaving that everything is in order, i.e. that he has not forgotten anything that he ought to remember. The biased question questions the correctness of that belief just as the echo-question (24) questions the correctness of an overt statement.

The use of negations in conjunction with questions is a matter with more complications than I have indicated here, however, but I will have to leave the issue with these few remarks.

4.3.1.2 *Main declarative clauses with marked intonation.* Syntactic marking is not a necessary feature of a nexus-question. A main declarative clause may be used as a vehicle of a direct question, provided it is marked in some other way. Marked intonation is then the most common feature, but it is often used in conjunction with tags and adverbial modifiers, which may be more or less strong as interrogative features. The basic feature matrix is

TONE	?
CAT	V
BAR	3
SUBJ	+
RANK	Main
FIN	+
SFORM	Decl

and the rules that realize the syntactic part of this clause are (4a) and (4b):

(4a) S'[Main, Decl] → Z[Foc] S[\$Z, Head]

(4b) S'[Main, Decl] → XP[Subj] VP[Head]

These interrogative utterances are frequently used in questions that occur medially in a spoken dialogue, expressing something that the speaker is led to conclude, expect or believe from what has just been said or from what has just occurred. This backward-facing property is typically marked in the utterance by means of an initial conjunction, such as *och*, 'and', *men*, 'but' or *så*, 'so, then'. Some examples are given in (28).

- (28a) *Men* du trivs därnere? *But you like it down there?*
 (28b) *Så* det blir ingen fest då? *So there will be no party then?*
 (28c) *Och* det här är Anders, förstår jag? *And this is Anders, I imagine?*

Many of the adverbs that commonly occur in declarative question vehicles are also backwards-facing, being either consecutive like *alltså*, *således*, 'consequently' and *med andra ord*, 'in other words', adversative like *i alla fall*, 'nevertheless' or anaphoric like *då*, 'then'. They can occur either internally or as tags:

- (29a) *Så* man kan *alltså* räkna med att skatterna kommer att höjas,
med andra ord?
So we can expect then that there will be an increase in taxes,
in other words?
 (29b) *Men* du är hemma till åtta *i alla fall?*
But you'll be home by eight at any rate?

Although these conjunctions and adverbs are very common in nexus-questions having declarative vehicles, I will not count them as interrogative features. In themselves they are quite indifferent to the distinction between assertions and questions, i.e. they are

as common in assertive utterances as they are in questions. The crucial feature is instead the marked intonation. Territorial properties of the topical domain are of course also important for interpretation.

A word with a more definite interrogative, or at least ignorative flavour, is *väl*. It can be used in non-categorical assertions also, but is more common with questions. It signals uncertainty or at least withdrawal of a definite commitment to the specification at issue. It can occur as a tag, but is much more common in the medial position. A few examples of its use are shown in (30).

- | | | |
|-------|-----------------------------------|--|
| (30a) | Du vill väl ha lite kaffe? | <i>You'll have some coffee, won't you?</i> |
| (30b) | Säg, det här är väl Stora Torget? | <i>Tell me, this is the ST, isn't it?</i> |
| (30c) | Ja, jag måste väl det. | <i>Yes, I suppose I have to.</i> |

Kanske, 'perhaps' and *visst*, can also be used in roughly the same way as *väl*, but with different implications. *Kanske* is weaker than *väl*, portraying the topical specification only as a possibility, whereas *visst* is strong, but attributes the topical specification to others. *Kanske* may also occupy the initial position of the clause and even the pre-initial position and the same holds for the interrogative *männe*. Thus all of the following are possible questions:

- | | | |
|-------|---------------------|---------------------------------|
| (31a) | Kanske bor han här? | |
| (31b) | Kanske han bor här? | |
| (31c) | Han kanske bor här? | |
| (31d) | Han bor kanske här? | <i>(Perhaps he lives here?)</i> |
| (31e) | Männe bor han här? | |
| (31f) | Männe han bor här? | |

Two definitely interrogative tags are *eller hur*, lit. 'or how' and *inte sant*, lit. 'not true'. They are normally stressed and carry marked intonation. There is no major difference in their interpretation. Both are typically used to seek, or ensure, agreement from the addressee on the topical specification:

- | | | |
|-------|--|--|
| (32a) | Den skruven skulle in HÄR, eller HUR? | |
| | <i>That screw should go here, shouldn't it?</i> | |
| (32b) | Han har väl tillräckligt med BEKYMMER ändå, inte SANT? | |
| | <i>He's got enough trouble as it is, hasn't he?</i> | |

A third interrogative tag is *va*, 'what', as in (33). Its meaning is not that much different from the previous two, but it is more of a clitical particle and is not stressed. It is also much used in narrative speech, where it functions as a kind of border-marker, signalling the end of a new piece of information. Then it does not have the marked intonation. Its use may be compared to a similar use of the English *right*. In the speech of many people it is frequently repeated, as in (34).

- (33) Nu var det MIN tur va?
Now it's my turn, isn't it?

- (34) När jag kom dit va, så hade dom andra inte kommit än va, så jag gick in
å satte mig å vänta va, ...

*When I got there /va/, the other hadn't come /va/, so I went in
and sat down to wait for them /va/, ...*

Another possible tag in declarative nexus-questions is *eller*, 'or'. It is frequently used in conjunction with other interrogative features, even other tags, as in (35a), but may possibly be the sole lexico-syntactic interrogative feature, as in (35c).

- | | | |
|-------|------------------------------|---|
| (35a) | Nu är det min tur va, eller? | <i>Now it's my turn, or isn't it?</i> |
| (35b) | Du är väl inte sjuk eller? | <i>You're not ill, are you?</i> |
| (35c) | Du trivs därnere, eller? | <i>You like it down there, don't you?</i> |

Eller as an interrogative tag often functions as a signal of a sudden doubt. It is as if the speaker realizes that what he has just said may not be correct and invites disagreement. Note the following literary example, where *eller* is awarded the status of a sentence, just as is possible for *eller hur?* and *inte sant?*.

- (35d) Hon tittade upp och ut över sällskapet, ungefär som en gammaldags
historielärare som kollar att klassen är vaken. När blicken mötte min, tyckte
jag att jag såg ett hastigt leende. Eller?³

*She looked up and scanned her company, in the manner of an old-fashioned
history teacher who is checking that her class is alert. When her eyes met mine,
I thought I could see a quick smile. Or?*

Finally, we should note that the negation may occur also in declarative nexus-questions. It then indicates that the topical specification is regarded as a remote possibility, but which nevertheless should be considered, just in case. As such it is often used in mollified requests:

- (36a) Du har inte en tia att låna mig?
You wouldn't have ten crowns on you, would you?

- (36b) Det finns inte tjugo öre?
You wouldn't have 20 öre (by any chance)?

³ - - - -

From G. Hägg: *Det automatiska paradiset*, En bok för alla, p. 303.

(36c) Det kan inte ha varit bin, inte?

It couldn't have been bees, could it?

(36d) *Det kan ha varit bin, inte?

lit. It could have been bees, not?

In the final example, the negation has been reduplicated in the tag position. This seems to be a way of emphasizing that one is not imposing one's views on the addressee. With a request such as (36a) or (36b) a negative tag sounds almost overly formal. It should be noted that the negation can not occur as a tag unless it also occurs in the medial position; (36d) is ill-formed.

4.3.1.3 *Suppressed nexus*. Any phrase that constitutes a single utterance may be interpreted as a nexus-question, provided that the following conditions obtain:

- (a) The phrase expresses a candidate specification of a topical domain,
- (b) The basis of the domain can be inferred from the preceding conversation, or from the situational context,
- (c) The utterance has interrogative intonation.

The only interrogative feature is in this case the marked intonation. Suppression of the nexus *per se* is not an interrogative feature, as this suppression is equally common in assertive utterances. However, the marked intonation in itself is not sufficient to determine an interpretation as a nexus-question. If the phrase is preferably interpreted as indicating a domain, or a domain concept, the utterance will instead be interpreted as an x-question. There is a clear difference between (37) and (38) in this respect:

(37) A: Jag har bjudit hit Eva och Anders.

B: Idag?

A: I've asked Eva and Anders to come.

B: Today?

(38) A: Vi måste träffas snart och göra det klart.

B: Mm, dag?

A: We must meet each other soon and finish it.

B: Mm, (which) day/date?

The third condition that must be fulfilled for a nexus-question to arise is that the basis for the topical domain can be determined from the context. The contextual determination of a topic will be dealt with in more detail in the next chapter. For the time being we may just note that if the basis is to be obtained from a previous utterance, the expressed specification can relate to that utterance in principally three

different ways, by repetition of some part of it, as in (39a), by substitution of some part of it, as in (39b), or by incrementation, as in (39c).

- | | | |
|-------|---|--|
| (39a) | A: Erik ska flytta till Norge.
B: Till Norge? | <i>E. is going to move to Norway.
To Norway?</i> |
| (39b) | A: Dom ska flytta utomlands.
B: Till Schweiz?
A: Jaa. | <i>They are going to move abroad.
To Switzerland?
Yes.</i> |
| (39c) | A: Erik ska flytta.
B: För Evas skull då eller? | <i>Erik is going to move.
Because of Eve, or what?</i> |

As can be seen from (39c) tags can be hooked onto suppressed nexus-questions. Other modifications are also possible.

The range of interpretations of a suppressed nexus-question is almost as large as for an expressed nexus-question. One difference, though, is that only complete interrogative clauses can be used as rhetorical questions.

4.3.1.4 *Subordinate nexus-questions.* Subordinate interrogative clauses are given the feature matrix below, which is spelled out by the rule (3b).

CAT	V
BAR	2
SUBJ	+
FIN	+
RANK	Sub
COMP	<i>om</i>

(3b) S[Sub, *om*] → COMP[*om*] S[Sub, Nil]

The COMP-node of (3b) is obligatory filled by the complementizer *om*, or one of its alternants, the informal *ifall/i fall* and the formal *huruvida*. *Om* and *ifall* are used also with conditional subordinate clauses, whereas *huruvida* is much more restricted in distribution. In context these complementizers, and the clause they occur in, are usually non-ambiguous, as the subordinate nexus-question occurs in an argument position of some predicate, whereas conditional clauses occupy adverbial positions. (40), which contains a subordinate nexus-question, may be compared to (41), which contains a conditional clause.

- (40) Vetenskapsmännen ville ta reda på om det fanns liv på Mars.
The scientists wanted to find out whether there is life on Mars.
- (41) Livet vore intressantare om det fanns liv på Mars.
Life would be more interesting if there were life on Mars.

Intermediate cases exist, but I will defer discussion of them until chapter 6.

It should be noted that subordinate nexus-questions may not only be vehicles of reported questions, but also of questions that are being raised. An example is given in (42).

- (42) Vet du om Erik har KOMMIT hem?
Do you know if Erik has come back?

4.3.2 *Alternative Questions.* The distinctive feature of an alternative question is that it contains a disjunction of two or more specifying expressions being candidates for the same topical domain. A disjunction in itself does not make the structure interrogative, however. At least one of the typical interrogative features must be present, the marked intonation, the inverted order between verb and subject, or, in the case of a subordinate clause, an interrogative complementizer. Normally all the listed alternatives are stressed:

- (43a) TE eller KAFFE? *Tea or coffee?*
(43b) Vill du ha TE eller KAFFE? *Do you want tea or coffee?*
- (43c) Hon frågar om du vill ha TE eller KAFFE?
She's asking whether you want tea or coffee?

Even when such an interrogative feature is present alongside the disjunction, it is not necessary that the question is interpreted as an alternative question. It may also be interpreted as a nexus-question, implying a choice for or against the disjunction as a whole rather than as a choice of one alternant. Interpretation of the structure as a nexus-question is favoured if the disjunction is pronounced as a single unit with at most one focus, but is of course also influenced by contextual factors that determine how specific a specification is needed. For example, with (45) the context may be such that if you have talked with either Eva or Anders the other one will know and it does not matter which one of them got to know it first.

- (44) Du vill väl ha lite TE eller kaffe?
I suppose you'd like some tea or coffee?
- (45) A: Har du TALAT med Eva eller Anders om det?
B: Ja, det HAR jag.

A: *Have you talked to Eva or Anders about it?*

B: *Yes, I have.*

With a disjunctive nexus-question *ja*, 'yes' is a satisfactory answer, as illustrated in (45), but with an alternative question it is not. Strictly speaking *nej*, 'no' is not a satisfactory answer to an alternative question either, as it does not satisfy the expectations on the response. Unlike the affirmative answer it may be informative, however, saying that none of the alternatives were actually suitable.

There is an obvious logical relation between alternative and nexus-question interpretations. Both are related to the same superordinate subject-matter, e.g., in (43) and (44), "The stuff you want to drink". Moreover, to endorse one alternative is to endorse the disjunction, and to endorse the disjunction is to put oneself in a situation where the next move is either to endorse one of the alternants or to refrain from making such a choice. But the latter option is usually marked, since the norm is to be as informative as required. In the case of (45) endorsement of the disjunction is a sufficiently informative move, because of the inferences that the context allows, but it is not sufficient as a response to (44).

Many domains can only be specified by a finite number of specifications, possibly only two. Still it makes a difference to list all the alternatives in a question as compared with mentioning just one. To mention just one alternative, as in a nexus-question, is strongly suggestive, whereas to list all alternatives explicitly implies that they are considered equally likely, or equally appropriate. (46) is not equivalent to (47).

(46) Krona eller klave?

Heads or tails?

(47) Krona?

Heads?

The alternative questions we have looked at so far may be termed *ordinary alternative questions*. As we have seen they may be expressed in either a main or a subordinate interrogative clause, or with a suppressed nexus. Another, special type of alternative question is the *polar alternative question*, which involves a choice between a specification and its negation. Formally they consist of an interrogative clause with positive polarity followed by *eller* and a possibly reduced version of the same clause with negative polarity. The reduction may go as far as not leaving anything but the negation. The following sentences are three different possibilities with no apparent difference in interpretation:

(47a) Vill du HA ett svar eller vill du INTE ha ett svar?

Do you want an answer or don't you want an answer?

- (47b) Vill du HA ett svar eller vill du INTE?

Do you want an answer or don't you?

- (47c) Vill du HA ett svar eller INTE?

Do you want an answer or not?

Polar alternative questions share with ordinary alternative questions the property of giving equal emphasis to the listed alternatives. The implications of this may be quite far-reaching. In a context where the positive alternative has been taken for granted this way of putting the question implies that the speaker is reconsidering his presuppositions. Polar alternative questions also have a sense of finality. By confronting the addressee with only the two polar alternatives a number of responses that would be possible for a nexus-question are no longer possible, e.g., *Jag vet inte*, 'I don't know', *Jag har inte bestämt mig ännu*, 'I'm not sure yet', *Kanske*, 'perhaps'. Thus, unless the addressee commits himself to the positive alternative, the speaker will reconsider his presuppositions.

Formally the phrase *eller inte* could be analyzed as a tag, just as the simple *eller* which occurs after interrogative clauses (5.3.2). These two phrases have very different functions, however. *Eller inte* forces a choice upon the addressee of exactly two alternatives, whereas *eller* on the contrary mollifies the suggestive character of a nexus-question allowing a greater range of responses. We may compare (48) and (49) in this respect:

- (49) A: Blir du FÄRDIG ikväll, eller?

B: Jag HOPPAS det, men jag vet inte.

A: Will you be ready by tonight, do you think?

B: I don't know, but I hope so.

- (50) A: Blir du FÄRDIG ikväll eller INTE?

B: NEJ, jag blir INTE färdig ikväll!

A: Will you be ready by tonight or not?

B: No, I won't be ready by tonight!

The elements that we thus far have been regarding as tags have the property of modifying the interpretation of the foregoing clause with respect to the force of the topical specification. The phrase *eller inte* is different; it brings with it the consideration of a new alternative, in the way conjunctions normally do, and thus have a much greater effect on interpretation.

As other alternative questions the polar alternative question can also be subordinated. The non-biased focusing on the two polar alternatives is still evident, but there is no necessary implication of a finally forced choice. (51) is more likely to be a report of

(49) than of (50):

- (51) Han frågade mig om jag skulle bli färdig ikväll eller inte.
He asked me whether I would be ready by tonight or not.

4.3.3 *X-questions*. We have defined an x-question as a question in which the speaker indicates a topical domain without mentioning any of the possible specifications for it. The most common vehicle for an x-question is a Wh-clause, i.e. a clause containing one or more Wh-words (interrogative pronouns or adverbs), but there are also other possibilities, in fact, quite a number of them.

4.3.3.1 *Main Wh-clauses*. The plain, or single, Wh-clause is a main clause characterized by having a foundation containing a question word, i.e. a Wh-word with descriptor [WHM Q]. The feature matrix of a plain Wh-clause is the following:

CAT	V
BAR	3
SUBJ	+
FIN	+
RANK	Main
SFORM	WhI

This category is spelled out by the rules (5a) and (5c). They allow the possibility of including a Wh-phrase in the body of the clause too, but in a plain Wh-clause this option is not taken.

(5a) S'[Main, WhI] → Z[WH, Q, Foc] S[\$Z, (WH, Q), Head]

(5c) S'[Main, WhI] → NP[WH, Q, Subj] VP[(WH, Q), Head]

A main Wh-clause normally has marked intonation when it is used as a question, although all of the prosodic interrogative features need not be present (Bredvad-Jensen, 1980). The value of TONE for a plain Wh-clause is thus taken to be '?'.
 ?'

The initial Wh-phrase may be complex or consist of a single Wh-word. There are Wh-words of the following syntactic categories in Swedish: N, A, P[Adv], AA and DET. Some of them appear under more than one category. Many of them could preferably be treated as having a bar-value higher than 0, but I ignore the question of bar-values here. The most common Swedish interrogative Wh-words are listed in table 3:

WORDS	CATEGORY	GLOSS
vem	N	who
vad	N, DET	what
vars	N[Gen]	whose, of whom
vilk-en/-et/-a	DET, N	which
hur	A	how
hurdan/-t/-a	A	what kind of
hur	AA	how
hur	P[Adv]	how
var	P[Adv]	where
vart	P[Adv]	where (to)
varifrån	P[Adv]	where (from)
när	P[Adv]	when
varför	P[Adv]	why

Table 3: *Interrogative Wh-words of Swedish.*

There also exist a number of forms, all of category P[Adv], having the morphological structure var+X, Where X is a preposition or adverb. They are rarely used, even in formal style, and are more common as relative forms than as interrogative forms, but should nevertheless be included. Some of them are listed below in table 4. *Varför*, *varifrån* and (originally) *vart* are also of this form, but listed in table 3 because of being in common use.

WORDS	GLOSS
varav	of which
vari	in which
varigenom	in which way
varmed	with which
varpå	on which
vartill	for what purpose
varöver	over which

Table 4: *Interrogative words of the form var+X.*

If a phrase contains a Wh-word it should itself be regarded as a Wh-phrase, i.e. carry the feature WH. WH is not restricted to phrasal heads, but is a foot-feature in the sense defined in 4.4.4.

Let us now look at the range of complexity that is possible for the initial Wh-phrase. First, a set of initial NPs:

- | | |
|--|--|
| (52) <i>Vem talade du med?</i> | <i>Who did you you talk to?</i> |
| (53) <i>Vilken läkare talade du med?</i> | <i>Which doctor did you talk to?</i> |
| (54) <i>Vilken av läkarna talade du med?</i> | <i>Which of the doctors did you talk to?</i> |
| (55) <i>Vem av läkarna talade du med?</i> | <i>Which one of the doctors did you talk to?</i> |
| (56) <i>Vems kläder är det här?</i> | <i>Whose clothes are these?</i> |
| (57) <i>Hurdana kläder vill du ha?</i> | <i>What kind of clothes do you want?</i> |
| (58) <i>Vad i helvete gör du?</i> | <i>What the hell are you doing?</i> |

Vem may constitute an NP in itself, as in (52). It is singular being replaced by *vilka* in the plural. *Vad* may also constitute a NP by itself. The determiner *vilken* naturally occurs with a head noun, as in (53), but does not require a nominal head as its English counterpart. These nominal Wh-words can take a restricted set of succeeding PPs, the most common being a PP referring to some set of individuals from which a choice is to be made, as in (54) and (55). The possessive *vems* and the adjectival *hurdan* occur in the same positions as their non-interrogative counterparts, as in (56) and (57). Finally, in Swedish as in other languages, it is possible to add an interjectional phrase to the Wh-phrase. However, this adjunct is restricted to the cases where the Wh-phrase itself consists of a single Wh-word, as in (58). The adjunct itself may be a PP or an NP. Other common interjectional adjuncts in Swedish are the nouns *fan* and *satan*, both referring to the devil. More detailed information on the grammar of these constructions can be found in Teleman (to appear).

Next, a set of examples with initial APs:

- | | |
|---------------------------------------|----------------------------------|
| (59) <i>Hur ser hon ut?</i> | <i>What does she look like?</i> |
| (60) <i>Hurdan är hon egentligen?</i> | <i>What is she really like?</i> |
| (61) <i>Hur lång är hon?</i> | <i>How tall is she?</i> |
| (62) <i>Hur bra i matte är hon?</i> | <i>How good at maths is she?</i> |

Both *hur* and *hurdan* may constitute full APs, as in (59) and (60). The adverb (AA) *hur* requires an adjectival head, as in (61). Complements of the adjective may be included in the phrase, as in (62). Wh-APs may also be embedded in an NP, as shown in the following example:

- | | |
|---|--|
| (63) <i>Hur stora framsteg har hon gjort?</i> | <i>How much progress has she made?</i> |
|---|--|

Next we will consider some examples with an adverbial Wh-phrase in initial position:

- | | |
|--|--------------------------------------|
| (64) <i>Var bor han?</i> | <i>Where does he live?</i> |
| (65) <i>Var i fridens namn har du varit?</i> | <i>Where on earth have you been?</i> |

(66) *Var i köket ligger dom?*

Where in the kitchen are they?

Just as the nominal Wh-words, the adverbial ones usually stand alone, constituting a phrase on their own. (64) is an example of this type. The interjectional modifiers are possible just as for NPs, as in (65), but extensionally restricting modifiers are also possible. The PP *i köket* 'in the kitchen' in (66) has this restricting function.

Finally, we should note that the initial Wh-phrase may be a PP. As there are no Wh-prepositions it is the NP that transfers its Wh-feature to the PP. With the exception of interjectional modifiers, there is no restriction as to what Wh-NPs that may occur:

(67) *Med vem talade du?*

With whom did you talk?

(68) *Med hur många poäng vann dom?*

By how many points did they win?

(69) *I vems ställe spelar han?*

Who's he standing in for?

(70) *I vilket av dessa länder är det soligast?*

In which of these countries is there most sunshine?

With the exception of a few lexicalized cases the construction in which the preposition is left stranded is much more common in informal speech. (67) is an overly formal way of expressing oneself. Even more strained is the construction with an adverb of the form *var+X*. There are cases for which all three constructions are possible, as in (71), but (71b) and (71c) would only be used in a formal style.

(71a) *Vad kan jag hjälpa till med?*

What can I do for you?

(71b) *Med vad kan jag hjälpa till?*

- " -

(71c) *Varmed kan jag hjälpa till?*

- " -

It should be noted that the information we get from the Wh-phrase is of particular relevance for a question interpretation. The Wh-word function as a kind of placeholder for a specifying expression. Non-Wh heads, whether nominal as in *vilken läkare*, 'Which doctor', or adjectival as in *hur lång*, 'how long', either indicates a domain concept or some restriction on it. Most of the Wh-words which can stand alone have implicit such restrictions, e.g., *vem* is used for a domain of people (or the like), *var* for a domain of locations, etc. The PP-modifiers of the type *av läkarna*, 'of the doctors' and *i köket*, 'in the kitchen' give restrictions on extensional domains. Prepositions in pied-piped constructions are also indicators of domain concepts, i.e. they signal how the sought specification is to fit into the basis. Of course they do this also when they appear in the body of the clause, but we can nevertheless see a strong tendency to express the basis in the body of the clause and information relating to other aspects of the domain in the foundation. The occurrence of interjectional phrases in the foundation of Wh-clauses can also be seen to conform with this tendency. These phrases certainly do not express a part of the basis. Their function, although difficult to pin down, seems to be to signal a certain frustration (or shock, surprise) at having

to raise the question.

There are variants of Wh-clauses where some constituent that seems to belong to the Wh-phrase is not expressed in the initial position but further down in the sentence. One such case we have already seen, the case of stranded prepositions, as in (55). It is of course not strictly necessary to analyze a stranded preposition as a part of the Wh-phrase, but it is in any case the constituent which signals where and how the Wh-phrase is related to the rest of the sentence. In this connection we should note the existence of stranded prepositions that only awkwardly admit of an analysis as heads of PPs to which the initial Wh-NP belong. (73) is instead equivalent to a Wh-clause with an initial Wh-word of the form *var+X*, as shown in (73ⁿ).

- (73) *Vad gör du så där för?* *What do you do that for?*
 (74) *Vad ska du med kniven till?* *What are you going to do with the knife?*
- (73') **För vad gör du så där?*
 (74') **Till vad ska du med kniven?*
- (73ⁿ) *Varför gör du så där?* *Why do you do that?*

Another very common type of discontinuous Wh-phrase consists of a single Wh-word - usually the pronoun *vad* but the interrogative adverbs *var*, *vart* and *när* are also possible - and an indefinite PP. With *vad*, the PP can only have the preposition *för*. With an interrogative adverb the PP consists of an indefinite adverb. I shall refer to this type of Wh-clause as a *Wh+Indefinite clause*. Here are a few examples:

- (75) *Var bor du någonstans?*
 lit. *Where live you somewhere?* *Whereabouts do you live?*
- (76) *Vad ska vi äta för någonting?*
 lit. *What will we eat for something?* *What will we eat?*
- (77) *Vad håller du på för lag?* *Which team do you support?*
- (78) *Vad är det för konstigt med det?* *What's so strange about that?*

These indefinite phrases may occur in the initial position together with the Wh-word, as in (79a), but their normal position is within the clause, as in (75)-(78). There they occupy a position which is appropriate for the grammatical function of the Wh-phrase as a whole, although they may also be carried to the right. Thus, beside (79b) some speakers can also use (79c).⁴

⁴ Lie (1982), discussing parallel constructions in Norwegian, judges the Norwegian counterpart to (79c) ungrammatical.

- (79a) *Vad för nåt hämtade du i källaren?*
 (79b) *Vad hämtade du för nåt i källaren?*
 (79c) *Vad hämtade du i källaren för nåt?*

What did you get from the cellar?

- (80) *Vad trodde Erik att du hämtade för nåt från källaren?*
What did Erik think you got from the cellar?

As with other Wh-clauses the initial Wh-phrase may be part of an unbounded dependency, as in (80). The position which is most difficult to question in this way is in fact the subject position. Both (81) and (82) sound odd. Instead a clefted construction, as in (83), or an impersonal construction, as in (84), would be used (cf. Lie, 1982). I think that the explanation for this is that indefinite subjects tend to be avoided, since indefiniteness implies that a new referent is introduced, whereas questioning normally presupposes an identifiable basis. This holds even in a language like Swedish where indefinite subjects are grammatically acceptable. Even odder are Wh-clauses with ordinary indefinite subjects, as in *Vad hängde en man för tavla på väggen?* (What picture did a man hang on the wall?).

- (81) ?*Vad för en tavla hänger där på väggen?*
 (82) ?*Vad hänger för en tavla där på väggen?*
 (83) *Vad är det för en tavla som hänger där på väggen?*
 (84) *Vad hänger det för en tavla där på väggen?*

What picture is that hanging on the wall over there?

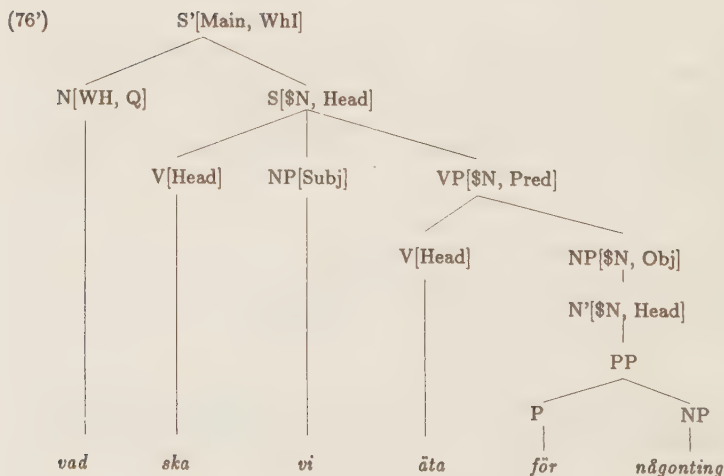
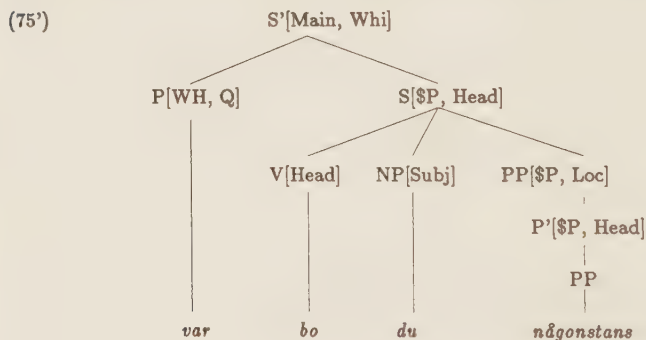
As for the interpretation of these clauses the indefinite phrase provides information on domain category. In the case of an indefinite adverb or pronoun this contribution is both unspecific and redundant, but indefiniteness in itself often functions as an indicator of an interesting domain of specification. We may compare (77) and (78) to the corresponding interrogative clauses (77') and (78'). The point of using an interrogative clause is that you portray yourself as recognizing the possibility of a negative answer. The interrogative clauses with indefinite and other interrogative NPs will be further discussed below in 4.3.3.5.

- (77') *Håller du på något (särskilt) lag?*
Do you support some particular team?

- (78') *Är det något konstigt med det?*
Is there something odd about it?

The general form of the Wh-Indefinite clause is not different from the plain Wh-clause. The special kind of dependency between the PP and the question word *vad* needs to be expressed in some way, however. It should be noted that the PP can occur in positions

where PPs do not normally occur, e.g., as in (76) or (79b), in the object position of a transitive verb. This fact suggests that the PP is part of an NP for which the nominal head is lacking. The adverbial discontinuous Wh-phrases can be analysed similarly as PPs lacking a head. Alternatively, the PPs in the body of the clause may be regarded as extraposed from the foundation. Such an analysis would agree better with the wellformedness of (79c), which indicates that the indefinite PP shares some properties of ordinary PPs. With the latter analysis the dependence between Wh-word and indefinite PP is hard to express, however, and I therefore keep to the first. The U-structures for (75) and (76) are then, in abbreviated form, the following:



Most of the other prepositional attributes of initial Wh-phrases that we have considered can occur internally in the clause also. They then appear in the position which would be normal for the questioned element. The examples (54), (62) and (66) all have alternatives. The interjectional modifiers can only appear initially, however, as they have no other ordinary clause-internal position. Thus, (58') is ungrammatical.

(54) *Vilken av läkarna* talade du med?

(54') *Vilken* talade du med *av läkarna*?

(62) *Hur bra i matte* är hon?

(62') *Hur bra* är hon *i matte*?

(66) *Var någonstans i köket* ligger dom?

(66') *Var någonstans* ligger dom *i köket*?

(58) *Vad i helvete* gör du?

(58') **Vad* gör du *i helvete*?

As regards the relation between structure and function of the Wh-clauses I have so far considered, the following generalizations can be made. They all indicate a domain of specification by expressing a basis, a domain concept and domain category. The nature of the domain concept is indicated by a preposition or is implicit in the verb and its subcategorization properties. The domain category may also be implicit in the Wh-word. Anything that relates to domain concept and domain category can appear with the Wh-phrase in the foundation, but nothing that is part of the basis can do so. Furthermore, a syntactic condition on the discontinuous Wh-phrases is that both the Wh-word and the head of the phrase (if they are different) must appear as part of the foundation.

Although the foundation can be considered the unmarked position of a Wh-phrase, it is not necessary that it occurs there. Especially in the spoken language clauses with final Wh-phrases are common. They are often referred to as echo-questions, since they are used as expressions of surprise or other emotion in response to an assertion, which the speaker "echos" by exchanging a Wh-word for one of the occurring specifying expressions. A typical example is given in (85). This is not the only use they have, however, and therefore I find the term echo-question a bit misplaced and will instead use the term *non-inverted Wh-clause*. Simple questions that follow up another question (or are given as a response) are very often of this type, as is illustrated in (86). They may also occur when the speaker is changing his mind in the middle of an assertion or comes in need of help, as in (87).

CAT	V
BAR	2
SUBJ	-
RANK	Sub
FIN	-
VFORM	Inf
SFORM	WhI

(5e) S'[WhI, Inf] --> Z[WH, Q, Foc] SA* V'[\$Z, Head]

These structures are typically used in deliberative questions. The subject of the deliberation should be inferred from the context and can not be questioned. An utterance of (90), if acceptable, can only be interpreted as a question about the object of the verb. A subject interpretation is prevented in the grammar by the FCRs (6) and (7) which require an infinitive verb to occur only in a non-finite clause, and a non-finite clause to have no subject.

(90) ?Vem fråga?

Who to ask?

6. [FIN -] ↔ [VFORM { Imp, Inf, Sup }]

7. [FIN -] → [SUBJ -]

Another variant is the *multiple Wh-clause*, which is distinguished by containing two or more Wh-phrases, one of which appears initially and the others appearing internally in the body of the clause. It is sometimes called a multiple question, a term which is not so appropriate since there are other types of interrogative structure that can express more than one question. Multiple Wh-clauses are generated by rules (5a) and (5c) by choosing the option WH in the dominated S.

(5a) S'[Main, WhI] --> Z[WH, Q, Foc] S[\$Z, WH, Q, Head]

(5c) S'[Main, WhI] --> NP[WH, Q, Subj] VP[WH, Q, Head]

A common use of a multiple Wh-clause is when the matter of discussion is the distribution of objects from different sets under some expressed relation. Suppose you are looking at a pair of twins, whose names you know, but whose identity you do not know. This is a typical situation where a multiple Wh-clause is used, e.g., (91). Another example is (92), which may address the question of how some given set of tasks should be distributed between two or more persons. The positions of the Wh-phrases reflect the positions of the corresponding specifications in the sought answer. An appropriate answer to (92) is (93).

(91) Vem är vem av dom?

Who is who of them?

(92) Vem gör vad?

Who does what?

- (93) Om du diskar, så städar jag.
If you'll do the dishes, I'll do the cleaning.

For other uses of multiple Wh-clauses see 5.3.6.

It is also appropriate to talk of *multiple questions* when Wh-phrases are coordinated, as in (94)-(95). Note first that two Wh-phrases in the foundation must be coordinated; (96) is clearly deviant.

- (94) Vilka böcker och vilka tidningar brukar du läsa?
Which books and which magazines do you usually read?

- (95) Hur länge och med vem hade hon varit ute?
How long and with whom had she been out?

- (96) *Hur länge med vem hade hon varit ute?
How long with whom had she been out?

Coordination of Wh-phrases is different from coordination of specifications in an interesting way. What is important for the coordination of Wh-phrases is that they share the same basis. If we try to coordinate Wh-phrases that require different bases, as in (97a), the result is ungrammatical. If we want to coordinate two questions of this kind we would have to express the first question in its totality and then follow up with the adverbial question in a sluiced form, as in (97b). This is apparently sufficient for the adverbial question to get a complete basis.

- (97a) *Vem och var träffade hon.
Who and where did she meet?

- (97b) Vem träffade hon, och var?
Whom did she meet, and where?

In contrast, coordination of specifications requires that the specifications share the same domain concept. Thus, (98) is a good answer to (94), whereas (99a) is odd as an answer to (95). Instead an ordinary assertion of the form (99b) is used, where the two specifications are not coordinated.

- (98) Jag läser deckare och serietidningar.
I read thrillers and comics.

- (99a) *Hon var ute hela natten och med Pelle.
She was out all night and with P.

- (99b) Hon var ute hela natten med Pelle.
She was out all night with P.

4.3.3.2 *Subordinate Wh-clauses*. Not all of the different types of main Wh-clauses have subordinate counterparts. Those that do are:

- * the plain Wh-clause,
- * the multiple Wh-clause,
- * the Wh+Indefinite clause,
- * the coordinated Wh-clause.

and those that do not are

- * the infinitival Wh-clause,
- * the non-inverted Wh-clause.

We give an illustration of each kind below:

- (100) Vi undrade *vem du talade med*.
We wondered who you were talking to.
- (101) Nu måste vi bestämma *vem som gör vad*.
Now we have to decide who is to do what.
- (102) John berättade *vad han sett för någonting*.
John told us what he had seen.
- (103) Vi vet inte *var eller när eller ens varför vi ska träffas*.
We don't know where or when or even why we are to meet.
- (104) *Nu planerar jag *vad göra nästa termin*.
Now I'm planning what to do next term.
- (105) *Jag ville veta *att de skulle spela vad för pjäs den här säsongen*.
I wanted to know that they were going to stage what play this season.

(105) may perhaps be taken as an echo-question. But it cannot be used to report what the subject wanted to know and in that sense there are no subordinate counterparts to non-inverted Wh-clauses.

Subordinate Wh-clauses have an initial Wh-phrase and the usual word order of subordinate clauses. Their structure is given by rules (6a) and (6b).

(6a) S'[Sub, WhI] --> Z[WH, Q, Foc] S[\$Z, {som, Nil}, (WH, Q), Head]

(6b) S'[Sub, WhI] --> NP[WH, Q, Subj] VP[som, (WH, Q), Head]

If the Wh-phrase is subject, the complementizer *som* is obligatory, otherwise it is

optional, although usually omitted.

The feature matrix is the following:

CAT	V
BAR	3
SUBJ	+
RANK	Sub
FIN	+
SFORM	WhI

The most apparent use of subordinate clauses is to report questions. As was noted in 2.3.4, however, whether a subordinate Wh-clause standing as a complement to a verb expresses a question or not depends on the nature of the verb (see 6.2 for further discussion). On the other hand a subordinate clause may be the vehicle of a question asked, as in (107).

- (107) Kommer du ihåg vilken sommar vi var i Paris?
Do you remember which summer we were in Paris?

- (108) Vilken sommar vi var i Paris?
Which summer we were in Paris?

- (109) -Vem är han som står därborta?
 -Vem han är? Det vet jag inte.
 -Who is the man standing over there?
 -Who he is? I don't know.

A special use of subordinate Wh-clauses is as a kind of echo-question to a question asked. (108) may occur as an immediate response to (107) and be followed by an answer. The same thing is possible when the question is direct, as in (109).

4.3.3.3 *Free (or sluiced) Wh-clauses.* X-questions are frequently formed by means of a clause fragment which basically consists of a single Wh-phrase. A few other elements may occur with it, notably the negation and the words *det* and *då*. The term Sluicing was introduced by Ross (1969) as a name for the transformation that was supposed to derive the clause fragment from a full clause. Although I do not use a transformational description I will, for want of a better term, make use of the same terminology. The sluiced Wh-clause is strictly speaking not a clause, but it is interpreted just as a clause, the missing nexus and the rest of the basis being obtained from the immediately preceding co-text. It may be either main, as in (110), or subordinate, as

in (111).

(110a) A: John sitter därborta. *J. is sitting over there.*
 B: Var då? *Where?*

(110b) A: Jag vill inte ha den. *I don't want it.*
 B: Varför inte det? *Why not?*

(111) Det blir ett möte i morgon, men jag har glömt *hur* dags.
 There will be a meeting tomorrow, but I have forgotten when.

The responsive *då* of (110a) we have met before. The *det* which appears in (110b) seems to function in the same way but can only be used with *varför*. However, it is also possible to say *Varför inte det då?* in (110b) with a double extension. Both of these particles sound somewhat odd or unnatural in subordinate clauses, which supports for the suggestion that they are responsive in nature.

4.3.3.4 *Cut clauses*. By a cut clause I mean a clause that has the following characteristics: (a) it is a declarative clause with marked intonation, (b) it is incomplete in the sense that it is ended at a point where a specification is expected, given the subcategorization properties of the used verb. I analyze them as containing a SLASH-descriptor:

TONE	?
CAT	V
BAR	3
RANK	Main
FIN	+
SFORM	Decl
SLASH	XP

They are often used in standardized questions, especially if they have a repetitive character. As an example, consider (112a) which is appropriately asked of the customers of a canteen or hot-dog stand. They are also used when one wants someone else to produce a specific answer, (112b) is a typical example of getting a child to say *tack* (thank you) when he ought to. Written variants of cut clauses often occur in school exercises and tests of the "fill in the blanks" type, although in this case, the blanks are not necessarily provided at the end. (112c), finally, is an authentic English example, showing the use of a cut clause as a turn of phrase.

(112a) Och du vill ha? *And you want?*

(112b) När man fått något så säger man? *When you've got something, you say?*

(112c) -I'm so accustomed to the sight that I do not see it. Indeed, I am grateful,
if the phrase is not meaningless in the circumstances, to the oceans
for another quality.

-And that is?

-Their power of isolating a man from his fellows.⁶

Cut clauses are very similar to non-inverted Wh-clauses. The only difference is in the absence of the Wh-phrase. Cut clauses give full expression to the basis of the question, but give only non-verbal indication of the domain concept and the point of attachment. In all of the examples so far considered we have verbs which normally do not occur without expressed complements. Taken as assertions all of the following sentences are ungrammatical.

(113a) *Du vill ha.

You want.

(113b) *Man säger när man fått något.

You say, when you've got something.

(113c) *Det är.

That is.

The verbs in themselves do not need to have strong selectional restrictions either. Rather it is the non-linguistic context that determines the nature of what is asked for. Such contextual expectations can be used also to impose an x-question interpretation even though the verb itself may be intransitive. Consider the following dialogue, where A's second question can not be interpreted as a question about whether the train will get there or not, but must be taken as a question about its time of arrival.

(114) A: När kommer BUSSEN fram?

A: When does the bus get there?

B: Ungefär halv åtta.

B: About half past seven.

A: Och TÅGET kommer fram?

A: And the train gets there?

B: Åtta precis.

B: At eight sharp.

Cut clauses pose an interesting problem for syntactic representation as they suggest that syntactic wellformedness is dependent on tone. The gap is also of a special kind since it is not bound within the clause, nor associated with a special function as the PRO of Government-Binding Theory (Chomsky, 1981). Even if we regard structures of this kind to be a discourse phenomenon (as opposed to pure syntax), we must have a way of distinguishing a cut clause, which expresses an x-question, from an ordinary declarative clause with marked intonation, which expresses a nexus-question. The way I propose to handle such phrases here is to assign a gap in the form of a SLASH attribute to them, as well as a marked tone. Without a supporting context, however, they may not be interpretable.

4.3.3.5 *Interrogative NPs.* Very often in spoken language the vehicle of a direct x-question is a simple NP pronounced with marked intonation. Some illustrations are

⁶ From W. Golding *Rites of passage*. London, Faber & Faber, p. 142.

illustrations are given in (115).

- | | |
|-----------------------|--|
| (115a) Personnumret? | <i>Your civic registration number, please?</i> |
| (115b) Din adress? | <i>Your address?</i> |
| (115c) Några nyheter? | <i>Any news?</i> |
- (115d) Det har inte gått så bra för svenskarna i OS-simningarna,
 Gunnar. Några tänkbara orsaker?
The Swedes have had little success in the Olympic swimming events,
Gunnar. Any conceivable reasons?

An NP may also be the vehicle of a suppressed nexus-question, so we must ask what the difference is between the two cases. As always the context of utterance plays a major role, but also the choice of head noun is of major importance. If the head noun expresses a common domain concept, it is likely that the NP should be interpreted as an x-question (cf. 4.3.1.3). Such nouns express attributes of individuals which often have a unique value in each case, as those of the first group below. Others are concepts through which we classify or characterize events, as those of the second group.

I.		II.	
namn	<i>name</i>	orsak	<i>reason</i>
adress	<i>address</i>	sätt	<i>manner, means</i>
telefonnummer	<i>phone number</i>	resultat	<i>result, effect</i>
vikt	<i>weight</i>	skillnad	<i>difference</i>
yrke	<i>profession</i>	nyhet	<i>news</i>
lön	<i>income</i>	fel	<i>wrong, fault</i>
		problem	<i>problem</i>

For the first group of nouns the individual concerned can be referred to by a genitive or possessive NP, as in (115b). If the individual is contextually salient such a reference is not necessary, but instead the NP will be definite. For the second group of nouns there is normally no assumption of uniqueness and the NP is often indefinite. It is up to the addressee to choose from the very large set of possible events anyone that fits the mentioned category.

The answering possibilities are different for an indefinite NP as compared to a definite or genitive one. An indefinite NP-question allows a negative answer, whereas a definite NP-question does not. This fact is of course related to the different uniqueness assumptions associated with the two types.

Many nouns, if not all, including those mentioned above, can be interpreted either as indicating domain concepts or as parts of referring expressions. The interrogative NP (116) can be answered by either (117) or (118) depending on the context of utterance.

In the first case the NP has been interpreted as expressing a topical domain with domain concept 'car make' and the referent of 'his' as basis. In the second case it has been taken as referring to a specific car as part of the basis while other aspects of the domain are being inferred from the context.

- | | |
|--------------------------------|------------------------------------|
| (116) Hans bil? | <i>His car make?</i> |
| (117) En Volvo 144, från 1978. | <i>A Volvo 144 from 1978.</i> |
| (118) Den hittades i garaget. | <i>It was found in the garage.</i> |

As we saw in the previous section indefinite NPs may express x-questions also when they occur internally in an interrogative clause, as in the previous examples (77'), (78') and (119) appearing below. The difference between having and not having an interrogative clause embedding the indefinite NP is not very large; it is just a difference in where the information about the basis is obtained from.

When a definite NP appear as a complement of an interrogative clause, as in (120), a new factor is added to the question, however. It is now possible to answer negatively and thereby deny the expressed condition on having the NP-question answered.

- | | |
|--------------------------------|---------------------------------|
| (119) Har det hänt något nytt? | <i>Is there any news?</i> |
| (120) Kan jag få din adress? | <i>Can I have your address?</i> |

Interrogative NPs may also be complements of interrogative and other ignorative predicates, such as *undersöka*, 'investigate', *glömma*, 'forget', *diskutera*, 'discuss' that also take subordinate interrogative clauses and Wh-clauses as complements. Also factive predicates with the same subcategorization properties, such as *känna till*, 'know about', *tala om*, 'tell' and others take interrogative NP complements. A few examples are given in (121).

- | | |
|---|---|
| (121a) Jag har glömt hennes adress. | <i>I have forgotten her address.</i> |
| (121b) De ville inte avslöja sina källor. | <i>They did not wish to reveal their sources.</i> |
| (121c) Vi diskuterade det bästa sättet att tillaga kantareller. | <i>We discussed the best way of preparing chantarelles.</i> |

Such interrogative NPs are known as *concealed questions* (Baker, 1968; Heim, 1979) or *strange NPs* (Ross, 1977). This terminology seems to me to reveal a prejudiced opinion on what an NP ought to mean and on how a question ought to be expressed. First of all, interrogative NPs do not conceal the question, they just express it in a different way from Wh-clauses. They always give expression to a domain concept and very often to the basis as well, although it happens to be sufficient for these questions to

indicate the basis by a referring NP. Second, the fact that many NPs refer should not make us conclude that those that do not are strange.

The sentences in (121) differ from those of (119) and (120) in that the interrogative complements can be paraphrased by Wh-clauses, containing the copula *vara*, 'be'.

- (119') *Har det hänt *vad som är nytt*? *Is there what is new?*
 (120') *Kan jag få *vad din adress är*? *Can I have what your address is?*

(121a') Jag har glömt *vad hennes adress är*.
I have forgotten what her address is.

(121b') De ville inte avslöja *vilka deras källor var*.
They did not wish to reveal who their sources were.

(121c') Vi diskuterade *vilket som är det bästa sättet att tillaga kantareller*.
We discussed what the best way is of preparing chantarelles.

The reason for this not being possible in (119) and (120) we can attribute to the subcategorization properties of the verbs. As Grimshaw (1979) has argued for English, we must distinguish syntactic subcategorization from semantic selection in the description of the combinatorial properties of predicates. Verbs like *hända* and *få* do not accept Wh-clauses as complements. (119') is bad also for the reason that the impersonal construction requires an indefinite subject complement.

In the paraphrases the interrogative NPs appear as subjects (or predicatives) of the copula. We may ask what their status is in clauses of this kind; are they still interrogative or not? Obviously they are no longer in themselves vehicles of a question, this function must be attributed to the clause as a whole. They are not referential either, since if we try to replace the NP by an NP which is clearly referential, the result is a sentence with different interpretation (if any). (122) does not mean the same thing as (121a').

(122) @Jag har glömt *vad Kungsgatan 48 är*.
I have forgotten what 48 Kungsgatan is.

My suggestion is that in these Wh-clauses, the NPs express domains of specifications, but not complete questions. In the corresponding declarative utterances, such as (123), they likewise express domains of specification. (123) has a simple subject-predicate structure, although the subject is not referring to an individual, as the subject of a sentence such as (124). But the logical structure is nevertheless the same, the difference being in what gets expressed. In (123) the domain concept ('address') is expressed, but in (124) it is not. The specification tells us, however, that the relevant domain concept is location (cf. 2.3.6).

- (123) Hennes adress är Kungsgatan 48. *Her address is 48 Kungsgatan.*
 (124) Huset ligger på Kungsgatan. *The house is in Kungsgatan.*

4.3.3.6 *Vadå- and hurdå-clauses.* We have noted the use of the deictic adverb *då* as a common tag of interrogative structures, especially of sluiced Wh-clauses and said that it functions as a sign that the question is asked in response to, or as a reaction to, something just heard or experienced. In (125) we have yet another example of this, where the utterance *Vad då?* asks for clarification of what is talked about in the previous utterance.

- (125) A: Är det från igår? *Is it from yesterday?*
 B: Vad då? *What?*
 A: Är det hackade ägget från igår? *Is the chopped egg from yesterday?*
 B: Det är inget fel på det.⁷ *There's nothing wrong with it.*

With both *vad* and *hur* this *då* has developed forms which are used as particles in structures of the form *vadå X?* and *hurdå X?*, where X is an arbitrary specifying expression. These structures are also used in responsive utterances where they signal that the speaker questions the appropriateness or meaningfulness of the specification X as used by the previous speaker. Such questions are very often emotional, expressing surprise, disbelief or indignation. The following examples illustrate this use:

- (126) A: Trängs inte så där!
 B: Vadå TRÄNGS!? Jag stod ju här.
A: Don't push!
B: What do you mean PUSH!? I was already standing here.
- (127) A: Vafan, det är ju bara biobiljetter!⁸
 B: Vadå BARA?
A: For God's sake, they're just movie tickets!
B: What do you mean, JUST?
- (128) A: Jag tycker Erik är lite konstig.
 B: Hurdå KONSTIG?
A: I find Erik a bit strange.
B: How do you mean STRANGE?

⁷

From J. Gunther: *Och den ljusnande framtid är vår*. ALBA, 1978 p. 13.

⁸

Quoted from a review of 'Indiana Jones', DN 1984-07-16.

There is a perceptible difference between *vadd* and *hurdå* in that the first is primarily used to question the given specification with no implication that an explanation is called for - the speaker is just putting a difference of opinion on record. *Hurdå*, on the other hand, usually asks for a clarification, or an explanation for why the specific phrase 'X' was used by the previous speaker.

The classification of *vadd*- and *hurdå*-clauses as x-questions needs some justification. Formally they contain both a Wh-word and a specification. But in spite of having such a salient specification they can not be answered by a *yes* or a *no*. If they ask for anything it is an explanation, just as a *Why*- or *how*-question does. However, *vadd*-clauses seem primarily be used not to ask questions, but to call into question, or object to, specifications given by others.

The phrase *vadd* can be used on its own as a sign of surprise to, or a failure to understand, a previous utterance. As such it has alternatives, such as *Hur så?* and *Vad för slag?*, which, however, have a different stylistic character. This use is very closely related to the other, at least if we assume that simple utterances generally have one specification in focus. When *vadd* occurs on its own it is naturally pronounced as one tonal unit, but in the structure *Vadd X* it is not. There is also the intermediate possibility, however, with *vadd* and *X* both constituting tonal units. It may be suggested that this structure is intermediate in the diachronic development of the structure *Vadd X*.

(129) A: Nu kan man hyra lyftkran på BANKEN.

B: VADÅ?

(130) A: Nu kan man hyra lyftkran på BANKEN.

B: VADÅ!? Hyra lyftkran på BANKEN?

A: Now you can rent a crane at the BANK.

B: What!? Rent a crane at the bank?

Finally we should note that the *vadd*-form has extended its use further, so as to become almost an exclamative. This may be considered natural since exclamatives are also responsive utterances, although they respond to what one experiences generally and are not restricted to previous utterances. A clear difference is that in a *vadd*-question the expressed specification is put into question, whereas in a *vadd*-exclamative it is underlined. However, there is a negative tint to these exclamations also, a kind of downgrading of the person or event being commented upon. To (or about) someone just returning from the hair-dresser you may say (131), which would fail to be appreciating. Similarly, about someone overtaking you on the road at high speed you may make the remark (132) to your passenger.

(131) Vadå nyklippt!

Had your hair done, haven't you!

(132) Vadå ha bråttom!

In a hurry, uh!?

4.4 A Swedish Grammar.

This section provides a compact presentation of the Swedish context-free phrase structure grammar I use in this study. For a presentation of the format, see section 4.1. For an overview of Generalized Phrase Structure Grammar, see Gazdar et al. (1985) and for an earlier Swedish grammar in a similar framework, see Anward (1982).

4.4.1 Attributes and Values.

1. General attributes:

TONE	{ ., ?, !, !?, , }
CAT	{ N, V, A, P, DET, COMP, CONJ, SA, AA }
BAR	{ 0, 1, 2, 3 }
SLASH	a category
AGR	a category with [CAT N]
PRO	a category with [CAT N] or [CAT P]
SO	a category
WH	a category
WHM	{ Q, R, E, F }
STEM	a string in the stem lexicon
GF	{ Head, Foc, Subj, DObj, Obj2, Pred, Rel, ... }
NEG	{ +, - }

TONE registers intonation contour and CAT basic syntactic category. The intended meaning of N, V, A, and P should be obvious. COMP is the category of those morphemes that can occupy the complementizer position, which, in this grammar, make up a very restricted set. CONJ is the category of coordinating conjunctions, such as *och* (and) and *eller* (or). SA is the category of sentence adverbs and AA the category of adverbs modifying adjectives and adverbs, comprising words such as *så* (so), *alldeles* (quite) and *hur* (how).

BAR registers phrase level. Four levels are used, but only verbal projections can have level '3'. To facilitate writing the following abbreviations are used: X indicates a phrase of 0-level, i.e. a word, X' indicates a category with BAR-value 1 and XP a category with BAR-value 2. Verbal projections with BAR-value 3 are written S'.

PRO is used with personal and certain other pronouns. The value of PRO is a category which is appropriate for their referents. Interrogative, relative and exclamative pronouns have the attribute WH as do the phrases which contain them. The attribute WHM is used to distinguish between these different types of Wh-words. SO is used in a similar way with the exclamative pronouns *så*, *sådan*.

The attribute GF registers surface grammatical functions. It applies to the major categories N, P, A, V and their projections. It takes different values for different types of projections. The co-occurrence restrictions concerning functions and categories are stated in FCR:s. Certain values of GF have special properties. The value 'Head', for example, is special in attracting so called 'Head features'. The value 'Foc' behaves as a variable, or place-holder, in the derivation of I-structures from U-structures.

2. Attributes of verbal projections:

FIN	{ +, - }
VFORM	{ Pres, Pret, Imp, Sup, Inf }
SUBJ	{ +, - }
RANK	{ Main, Sub }
COMP	{ <i>att</i> , <i>om</i> , <i>som</i> , <i>vad</i> , <i>att'</i> , Nil }
SFORM	{ Decl, Int, Imp, WhI, WhE, WhR, WhF, Excl, Disl }
PASS	{ +, - }

FIN indicates whether a clause is finite or non-finite. VFORM registers the morphology of the verb. FCR:s relate values of these two attributes. The attribute SUBJ is used to indicate the presence or absence of an overt subject. RANK handles the difference between main and subordinate clauses. COMP is used to indicate what complementizer a subordinate clause has, if there is one. The formative *att* in Swedish occurs with both finite and non-finite clauses, corresponding to the English *that* and *to*, respectively. I distinguish the two cases by using *att* for the finite case, and *att'* for the infinitive case.

SFORM applies to main clauses and subordinate clauses with foundations. It indicates the basic topology of the clause, in particular whether it has a foundation and, if so, what type of foundation.

PASS registers whether a clause is active or passive.

3. Nominal attributes:

CASE	{ Gen, Obj, Nom }
PERS	{ 1, 2, 3 }
SPEC	{ Def, Indef, Part }
NUMB	{ Sg, Pl }
NFORM	{ Def, Indef }
GEND	{ Ntr, Utr }

CASE is surface oriented. Only certain pronouns are marked for either Objective or Nominative case. The last four of these features apply to determiners as well, and the

last three to adjectives. Adjectives are also specified according to their comparative forms:

DEGR { Comp, Sup, Nil }

4. Prepositional/Adverbial attributes:

Prepositions, locative and other circumstantial adverbs and subordinating conjunctions are treated as words of the same category, P. They differ in their distribution, however, and to distinguish between them an attribute PTYPE is used.

PTYPE { Prep, Adv, Conj }

4.4.2 *Feature Co-occurrence Restrictions*. Some of the FCR:s have been described informally above. Here are the formal versions:

1. [SFORM] ↔ [RANK Main] v [BAR 3]
2. [COMP] ↔ [[RANK Sub] [BAR 2]]
3. [VFORM Imp] ↔ [[RANK Main][SFORM Imp]]
4. [VFORM Inf] → [RANK Sub]
5. [FIN +] ↔ [VFORM {Pres, Pret}]
6. [FIN -] ↔ [VFORM {Imp, Inf, Sup}]
7. [FIN -] → [SUBJ -]
8. [SUBJ] → [[CAT V] [BAR { 2,3 }]]
9. [GF] → [CAT { N, P, A, V }]
10. [SFORM Int] → [[BAR 2] [SUBJ +] ~[SLASH]]
11. [SFORM Imp] → [[BAR 2] [SUBJ -] ~[SLASH]]
12. [COMP som] → [SLASH]
13. [COMP { att, om, som, vad }] → [FIN +]
14. [PRO] → [STEM]
15. [WH] ↔ [WHM]
16. [CAT { A, DET }] → [AGR]
17. [BAR 0] → [STEM]
18. [CAT { COMP, DET, CONJ, SA, AA }] ↔ ~[BAR]
19. [GF DObj] → { NP, S'[Sub], S[Sub] }
20. [GF Obj2] → { NP, S'[Sub], S[Sub] }
21. [GF Pred] → { AP, NP, VP }
22. [GF Prt] → [[CAT { P, N }] [BAR 0]]
23. [GF Loc] → [[CAT P] [BAR 2] [PTYPE { Prep, Adv }]]
24. [GF Poss] → [CASE Gen]
25. [GF Rel] ↔ [SFORM WhR] v [COMP som] v [[COMP Nil] [SLASH]]

4.4.3 *Phrase Structure Rules*. The following rules and rule schemata register both dominance and precedence relations. The symbol '' between two elements of the right hand side indicates that the order is free, i.e. it could be the reverse of the order given. If three or more constituents are linked by this sign, any permutation of them is accepted. X, X' and XP are used as variables over categories with a fixed bar level and Z is a variable admitting categories with different values on both CAT and BAR. 'g' is used as a variable over grammatical functions.

To shorten the rules I indicate DAGs by lists of values, without explicit mentioning of the corresponding attributes. I have also shortened the descriptor [SLASH XP] to \$XP.

1. *Initial Rule*. The initial rule introduces the top node U, which is required to be specified for TONE. The structure of an utterance unit is regarded as consisting of one major structural unit to which other elements may attach, either initially or at the end as tags. The exact number of such elements, or their categories, will not be analysed. Instead I assume that the node U provides for three positions, one central and one at each side (cf. Andersson, 1984). The two corner positions are referred to as LC (the left corner) and RC (the right corner). When I speak of tags I mean elements appearing in the position RC.

(0) U[TONE] --> (LC) (Z) (RC)

2. *Rules for Verbal Projections*. There are verbal projections at three levels of complexity. A verb together with its complements form a verbal projection of BAR-value 1. The rule for such verb phrases is given in (1). The order between complements is partly determined by syntactic category (NP generally precedes PP), partly by syntactic complexity and partly by grammatical function (direct objects precede secondary objects). I do not express such regularities here, however. Verbal projections at level 2 also have a position for sentence adverbs and, in case they are subordinate, a complementizer position. They may or may not have a subject. The rules of (2) concern such projections without subject (VPs) and the rules of (3) those with a subject (Ss). Rules (4)-(8) all deal with verbal projections at the third level. The rules of (4) give the structure of declarative clauses, those of (5)-(8) the structure of various types of Wh-clauses, both main and subordinate. The rules of (9) account for the occurrence of non-complements and rule (10) accounts for the structure of sentences with a left-dislocated constituent.

(1) V' --> [Head] Z[g]*

(2a) VP[Main] --> [Head] (N[PRO, DObj]) ~ SA* Z[g]*

- (2b) VP[Sub, *c*] → COMP[*c*] SA* V'[Head]
 where *c* is *att'* or *som*.
- (3a) S[Main] → [Head] NP[Subj] ~ (N[Pro, DObj]) ~ SA* Z[*gɔ̃*]*
- (3b) S[Sub, *c*] → COMP[*c*] S[Sub, Nil]
 where *c* is *att*, *om*, *som* or *vad*
- (3c) S[Sub, Nil] → NP[Subj] SA* V'[Head]
- (4a) S'[Main, Decl] → Z[Foc] S[\$Z, Head]
- (4b) S'[Main, Decl] → XP[Subj] VP[Head]
- (5a) S'[Main, WhI] → Z[WH, Q, Foc] S[\$Z, (WH, Q), Head]
- (5b) S'[Main, WhI] → Z[Foc] S[\$Z, WH, Q, Head]
- (5c) S'[Main, WhI] → NP[WH, Q, Subj] VP[(WH, Q), Head]
- (5d) S'[Main, WhI] → NP[Subj] VP[WH, Q, Head]
- (5e) S'[WhI, Inf] → Z[WH, Q, Foc] SA* V'[\$Z, Head]
- (6a) S'[Sub, WhI] → Z[WH, Q, Foc] S[\$Z, { *som*, Nil }, (WH, Q), Head]
- (6b) S'[Sub, WhI] → NP[WH, Q, Subj] VP[*som*, (WH, Q), Head]
- (7a) S'[Sub, WhR] → Z[WH, R, Foc] S[\$Z, Nil, Head]
- (7b) S'[Sub, WhR] → NP[WH, R, Subj] SA* V'[Head]
- (8a) S'[Sub, WhE] → Z[WH, E, Foc] S[\$Z, Nil, Head]
- (8b) S'[Sub, Excl] → Z[SO, Foc] S[\$Z, Nil, Head]
- (9a) VP → VP Z[~[GF]]*

(9b) $S \rightarrow S \ Z[\sim[GF]]^*$

(9c) $S' \rightarrow S' \ Z[\sim[GF]]^*$

(10) $S'[\text{Main}, \text{Disl}] \rightarrow Z \ \{ S'[\text{Head}, \$Z] / S[\text{Head}, \$Z] \}$

3. *Rules for Nominal Projections.* These rules only admit the simplest types of NPs, but they are sufficient for the present needs.

(11) $N' \rightarrow N[\text{Head}] \ PP^*$

(12) $N' \rightarrow AP[\text{AGR}, \text{Qual}] \ N'[\text{Head}] \ (PP)$

(13) $NP \rightarrow (\{ \text{DET}[\text{AGR}] / NP[\text{AGR}, \text{Gen}, \text{Poss}] \}) \ N'[\text{Head}] \ ([\text{CAT } V] \ [GF \ \text{Rel}])$

(14) $NP \rightarrow NP[\text{Head}] \ ([\text{CAT } V] \ [GF \ \text{Rel}])$

4. *Rules for Adjectival Projections.*

(15) $A' \rightarrow (AA) \ A[\text{Head}]$

(16a) $AP[\text{Pred}] \rightarrow A'[\text{Head}] \ Z[g\bar{x}]^*$, where $Z = PP$ or NP

(16b) $AP[\text{Qual}] \rightarrow Z[g\bar{x}] \ A'[\text{Head}]$, where $Z = PP$ or NP

5. *Rules for Prepositional Projections.*

(17a) $P' \rightarrow P[\text{Adv}, \text{Head}] \ (PP)$

(17b) $P' \rightarrow P[\text{Prep}, \text{Head}] \ Z[\text{Obj}]$, where $Z = NP$, $S[\text{Sub}]$ or $VP[\text{Inf}]$

(17c) $P' \rightarrow P[\text{Conj}, \text{Head}] \ S[\text{Sub}]$

(18) $PP \rightarrow (AA) \ P'[\text{Head}]$

6. *Rules for Conjunction.*

Conjunction is constrained both syntactically and semantically. There are many problems with the feature specifications of coordinated constituents, that I will not discuss here. For discussion, and an attempt to solve some of them, see Gazdar et al.

(1985: 94f). The rules I give are taken from there.

A conjunct has a specific value for the feature CONJ (which may be 'Nil'). In case it is 'Nil' the conjunct contains no conjunction, otherwise it does.

(19) $Z[\text{COORD } C] \rightarrow (\text{Head} [\text{CONJ Nil}])^* (\text{Head} [\text{CONJ } C])$
 where C is *och* or *eller*.

(20) $Z[\text{COORD } C1-C2] \rightarrow (\text{Head} [\text{CONJ } C1]) (\text{Head}, [\text{CONJ } C2])$
 where $C1-C2$ may be *både-och*, *varken-eller*, *antingen-eller* eller *Nil-men*.

4.4.4 Feature Instantiation. An Instantiation Principle is a rule that relates feature specifications on different nodes of a local tree. Every instantiation principle applies only to certain attributes, which are indexed in the grammar as obeying that principle. Of the three instantiation principles discussed by Gazdar et al. (ibid.), the Head Feature Convention, the Foot Feature Principle and the Control Agreement Principle, I adopt the first two as they are given, although I will not give strict formulations of them. In the case of agreement the Control Agreement Principle cannot be applied in the present framework. I only account for agreement within NPs and leave the agreement of predicative APs and NPs out of the description. I also use an additional Convention which, for the sake of sticking to an anatomical metaphor, may be called the Finger Feature Convention.

(I) The Head Feature Convention.

The value of any attribute which belongs to the set HEAD is the the same for the root of a local tree and the daughter constituent which has the function 'Head', unless there is a phrase structure rule or FCR that allows a different configuration.

The attributes of HEAD are:	CAT	CASE	DEGR
	VFORM	SPEC	PTYPE
	RANK	GEND	AGR
	PASS	NUMB	
	FIN	NFORM	
		PERS	

(II) The Foot Feature Convention.

The value of any attribute which belongs to the set FOOT must be the same for the root of a local tree and at least one of the daughters, unless there is a phrase structure rule or an FCR that allows a different configuration.

The attributes of FOOT are: SLASH
WH
SO

(III) The Finger Feature Convention.

It is not uncommon that a local tree contains two or more daughters of the same syntactic category and phrase level. Yet they differ in interpretation and perhaps also in their syntactic properties. The primary examples are found in relation with complementation. Of course such daughters always differ in their order, but order may not be the pertinent property for interpretation. So, they have to be distinguished in some other way. Grammatical functions serve as such distinguishers, but then we have to make sure that two constituents are not assigned the same function. This will be done by requiring of grammatical functions that they obey what may be called The Finger Feature Convention, the name being motivated by the fact that no two fingers of the hand are identical. It can be stated thus:

The value of an attribute which belongs to the set FINGER must be different on different daughters of a local tree.

The attributes of FINGER are: GF

(IV) Agreement.

The constituents that show agreement in Swedish are determiners and APs in an NP and predicative APs and NPs. Verbs never show agreement. I use AGR as an attribute for indicating what category a word or phrase must agree with, but, as explained above, the conditions on the value of AGR are made explicit only for the first case.

The value of AGR for a constituent appearing in a nominal projection must be non-distinct from the category of its head.

(IV) Feature Specification Defaults.

Features and feature values which are not positively specified from a rule, or entry in the stem lexicon, can be specified by default. Some examples of default assignments are the following:

~[CASE]	[BAR] → [BAR 0]
~[SLASH]	[PERS] → [PERS 3]
~[WH]	[AGR] → [AGR [GEND NTR] [NUMB SG]]

5. THE INTERPRETATION OF INTERROGATIVE STRUCTURES.

In the previous chapter the most important interrogative structures of Swedish were identified and described grammatically. In chapter 4 some contextual factors that influence question interpretations were also identified. In this chapter I will bring the linguistic and extralinguistic structures together in order to state rules for how interrogative interpretations come about. In the first section (5.1) the interrogative structures and their properties as question vehicles are summarized. In (5.2) an interpretative procedure is sketched, which models interpretation in the sense that it detects and categorizes properties of utterances that are relevant for their interpretation as interrogative speech acts on the basis of their syntactic and tonal properties, and properties of their context. In (5.3) some rules of interpretation are formulated, both informally and in a form suited to the interpretation procedure, and the interpretation of the different interrogative structures is illustrated.

The interpretation of an utterance as a question can for analytical reasons be divided into two basic parts: on the one hand, to understand it as an instance of a question, i.e. to understand that some domain is being questioned rather than specified, and, second, to understand what domain is involved. The emphasis in this chapter is on these two aspects of question interpretation. Other aspects such as the speaker's purpose in raising the question and expressed or implied conditions on the answer are touched upon only marginally or not at all.

5.1 The Interrogative Structures as Question Vehicles.

5.1.1 *Question Interpretations.* As an illocutionary categorization of an informative utterance is primarily determined by the way in which the speaker relates himself and his audience to the topical domain, the illocutionary categories will be related to "modes" of doing this. The two modes that will be of most use to us here are the *assertive* mode and the *interrogative* mode. Given our previous characterizations of assertions and questions these two labels encode the difference between specifying a domain (adopting the A-role) and putting one up for specification.

For the second aspect of a question interpretation the interpreter must identify the components of a topical domain: a basis, a domain concept and the paradigmatic restrictions linked to the domain concept.

For both of these aspects the interpretation of an utterance is supported and constrained both by features of the utterance itself and by features of the context. Although the contextual features are important, we can nevertheless say that what makes an interrogative structure interrogative is its potential for suggesting and directing question interpretations. Interrogative structures differ considerably in the way they support question interpretations, e.g., in the way the interrogative mode is expressed and in the kind of information they give on the domain. The differences between them can be described with reference to one or more of the following properties:

- (1) Whether the interrogative mode is signalled by structure, tone or lexis, or a combination of these;
- (2) Whether or not the topical domain can be identified on a local basis, e.g., by the occurrence of a structural element or lexeme in a position with designated interpretation;
- (3) Whether or not they contain a specifying expression for the domain;
- (4) Whether or not they give direct expression to domain concept or domain category;
- (5) Whether or not they give expression to elements of the basis.

In table 5 on the next page, the different interrogative structures are classified in terms of the properties just given. The classification is explained in the next section.

5.1.2 *Interrogative Features.* It can be seen from table 5 that only few Swedish interrogative structures allow an unequivocal identification of the domain on a local basis, i.e. in the sense of property (2). In practice, however, this fact does not cause problems. Most utterances have sufficient contextual backup in terms of a common focus of attention and shared knowledge of the basis. When this is not at hand, the speaker can bring it about by retracing the basis, or, by presenting it to him. (1) is a typical example of a question introduced in this way:¹

- (1) Vi såg på Aktuellt igår om den här uträkningen vad som finns, så att säga, att ta av, för att behålla vår konkurrenskraft gentemot utlandet som Konjunkturinstitutet har gjort, och då undrar jag, varför LO och SAF alltid kommer till så pass olika resultat om vad vi tål och inte tål, ...

¹ -----
From a ring-in programme broadcast by Swedish Radio, 6. May, 1980.

PROPERTIES	(1)	(2)	(3)	(4)	(5)
STRUCTURES					
Plain IntCl	Str/T	No	Yes, 1	No	Yes
Modif. IntCl	Str/T/Lex	No	Yes, 1	No	Yes
Neg. IntCl	Str/T/Lex	No	Yes, 1	No	Yes
DeclCl	T	No	Yes, 1	No	Yes
Tag DeclCl	T/Lex	No	Yes, 1	No	Yes
Intmod DeclCl	T/Lex	No	Yes, 1	No	Yes
Suppr. Nexus	T	No	Yes, 1	No	No
Subord IntCl	Str/(Lex)	No	Yes, 1	No	Yes
Main Ord AltIntCl	Str/T	Yes	Yes, n	No	Yes
Main Polar AltIntCl	Str/T	Yes	Yes, 2	No	Yes
Subord AltIntCl	Str/(Lex)	Yes	Yes, n	No	Yes
Main Plain WhCl	Str/T	No	No	Yes	Yes
Main WhIndCl	Str/T	Yes	No	Yes	Yes
NonInv WhCl	Str/T	Yes	No	Yes	Yes
Inf WhCl	Str/T	Yes	No	Yes	Yes
Main MultWhCl	Str/T	No	No	Yes	Yes
Subord WhCl	Str/(Lex)	No	No	Yes	Yes
Main Sluiced WhCl	Str/T	No	No	Yes	No
Compl. Sluiced WhCl	Str/Lex	No	No	Yes	No
Cut Cl	(Str)/T	No	No	No	Yes
Free IntNP	T	Yes	No	Yes	Yes
Compl. IntNP (MCl)	Str/T	No	No	Yes	Yes
Compl. IntNP (SubCl)	Lex	Yes	No	Yes	Yes

Table 5: *Swedish Interrogative Structures as Question Vehicles.*

We saw on The News yesterday about this assessment of what there is, so to speak, to take from, in order to maintain our competitiveness in relation to foreign countries, which the Konjunkturinstitutet has done, and now I wonder, why is it that the LO and the SAF always reach such different conclusions as to what we can afford and can't afford, ...

As can be seen from this example it is also common to embed an interrogative structure under a predicate which signals that it is to be interpreted as a question (Ahrenberg, 1982). This is particularly important for the interpretation of subordinate interrogative clauses, when they pose or report questions.

Most utterances are also quite short, which means that the domains that can possibly be implied are restricted, at least if we assume an utterance consisting of a clause with a single predicate. Sentence accent is also vital for the identification of topical domain (cf. above 4.1.2), but not included here.

Structural and tonal features are the most important in suggesting that the utterance has an interrogative mode. This does not mean that they are completely unambiguous, at least not the structural features. Structural features on the whole seem to be weaker than tonal features. If we look at the interrogative clause, it can not be used as a question vehicle without an accompanying interrogative tone. It also seems more ambiguous; with a different tone it can have other interpretations, whereas an interrogative tone in conjunction with a declarative clause, or any other type of clause, still supports a question interpretation.

Most of the interrogative structures contain elements that refer to the basis. Those that do not are the Sluiced Wh-clauses and the Suppressed Nexus. Traditionally, such utterances are described as elliptical. It is true that they require relatively strong contextual backing in order to be interpretable, but so do often clauses too, as (1) shows. Therefore, it seems to me more appropriate to talk about more or less contextual backing for a structure than to talk about an absolute distinction between elliptical and non-elliptical structures.

The number of candidate specifications determine the subtype of a question as nexus-question, alternative question or x-question. As discussed before, Wh-phrases do not count as specifying expressions.

Wh-phrases give a local identification of the domain when they are placed in the same position as a corresponding specification. When they occur in the initial position of a sentence, however, this is not possible, since their argument role can not be determined until a gap has been encountered somewhere in the following clause. Of course, in a simple utterance with one predicate, the function of the Wh-phrase is not hard to determine, but it must be done by considering the utterance globally. Still, a plain Wh-clause is neatly structured from the point of view of determining the topical domain, as explained in 4.3.3.1.

The presence of an interrogative tone is correlated with an interpretation of the question as a *direct question*, i.e. a question addressed to an interlocutor. *Indirect questions*, by which I mean questions that the speaker reports, but does not address to his audience, usually have no interrogative tone. Instead they have a structural interrogative feature, such as an interrogative complementizer, or Wh-phrase. Interrogative complementizers, apart from *huruvida*, are not unambiguous, but the matrix predicate of a complement will determine whether it expresses a question, as in (2), or not.

(2) Han frågade mig om jag var ledig. *He asked me whether I was free.*

Assuming the topic *What did he do?* for (2), the subordinate interrogative clause is part of the specification that is asserted on that topic. Nevertheless it can be assigned an internal structure in terms of basis and domain category by an interpreter. This means that we must recognize levels of structuring in terms of domains and specifications and that interrogative features, as well as other illocutionary features, have scope.

5.2 Modelling Interpretation.

In this section a procedure for determining illocutionary interpretations of utterances is sketched. The focus is on the contribution of grammatical features to a question interpretation. Its purpose is not to simulate human perception or interpretation, but to provide a framework within which rules for the correlation between structural and functional properties of an utterance can be stated with some degree of precision.

5.2.1 General features. The sign which is to be interpreted is the given utterance. Its linguistic properties are represented by an utterance structure, or U-structure, as described in 4.2.

The contextual properties of an utterance, as viewed by the interpreter, are divided between a universe of discourse and an immediate context-of-utterance. The latter is represented by a *Context Structure* in the format which was given in chapter 3.3. The context affects the interpretation in several different ways. First, it determines referents for expressions used in the utterance; second, it guides the lexeme interpretation, i.e. the interpretation of stems in terms of meaningful lexemes occurring; and thirdly it is crucial in determining the information structure of the utterance, in particular its topical domains. The Context Structure must obviously be allowed to change from one utterance to the next, perhaps even from one tone unit to the next and the same may be true of the universe of discourse. This part of the interpretation procedure is, however, only assumed, not explicated.

The interpretation procedure is guided by a set of interpretation rules, which refer to both linguistic and contextual properties of an utterance. The result of applying the interpretative rules to a given pair of an utterance structure and a contextual structure is an *Interpretation structure*, or shorter, *I-structure*, which represents some of the essential aspects of an interpretation of an utterance. This includes the structure of the utterance in terms of topical domain(s) and candidate specifications, and the speaker modes, i.e. the information necessary to determine the locutionary and illocutionary aspects of the utterance. This representation is not to be equated with an illocutionary categorization of the given utterance, however, as it could possibly form the basis of more than one illocutionary categorization. In fact, if properly specified it should support all possible illocutionary categorizations of the utterance, although such a detailed description will not be attempted here.

5.2.2 *Modes*. The interrogative and assertive modes both contrast with what may be called a retractive mode, in which all specifications are already known, or can be anticipated, by the participants. This is typically the case for specifications that together make up the elements of a basis. If we consider the first part of the utterance (1), *We saw on The News yesterday ...*, its function is not to assert something, but to remind the participants of an event they know of and to focus their attention on it. For a listener who does not know about the event, it can of course function to inform him about it, but it does not address a topical domain; it serves to introduce one.

In Searle's taxonomy of illocutionary acts (Searle, 1979c) both assertions and retractive utterances would come under the category of Representatives. They obviously have something in common, but they also have obvious differences in dialogue function, e.g., that a retractive utterance is expected to be continued until a topical domain has been introduced, whereas an assertion is a possible closing of a topical domain. This difference can be seen also in the kind of backchannellings that can be given; the words *jaså* and *jaha* can be used in response to an assertion, whereas *mmm* and *ja* are more appropriate for retractive utterances.

Retractive utterances are one kind of presentative utterances, the general function of which is to introduce entities that are going to be talked about. Other types of presentative utterances are those which introduce a story or fairy tale. The bases of these utterances cannot be construed as entities in the same way as for assertions and questions. Instead we could regard the relevant sub-universe as forming the basis, the domain concept being, say, "existing entities", or else regard such utterances as space-builders in the sense of Fauconnier (1985).

Beside relating himself and the audience to a topical domain in a particular way, the speaker also relates himself to the specification he uses. The following utterances all have an interrogative mode, but they differ in the speaker's position to the expressed candidate specification *på måndag*, 'on Monday'.

- (3) Det var inte på MÅNDAG vi skulle träffas, (väl)?
It wasn't on MONDAY that we were going to meet, was it?
- (4) Var det på MÅNDAG vi skulle träffas?
Was it on MONDAY that we were going to meet?
- (5) Var det inte på MÅNDAG vi skulle träffas?
Wasn't it on MONDAY that we were going to meet?
- (6) Det var väl på MÅNDAG vi skulle träffas?
It was on MONDAY that we were going to meet, wasn't it?
- (7) Det var på MÅNDAG vi skulle träffas?
It was on MONDAY that we were going to meet?

The interpretation of (3)-(7) is likely to be affected by the tone used, but the following interpretations are suggested by the structural and lexical features: (3) signals a belief in the incorrectness of the specification 'Monday'; (4) is fairly neutral, but at least it signals that the speaker has reasons to believe that 'Monday' is a possibly correct specification; (5)-(7) are stronger than that, signalling a belief that seeks confirmation. The strength of that belief is not strictly codified, but the potentials of the three sentences differ, since, with (6) and (7) there is the possibility of hearing them as assertions. A change of tone could make (7) a categorial assertion, or retractive utterance, and (6) a guarded assertion.

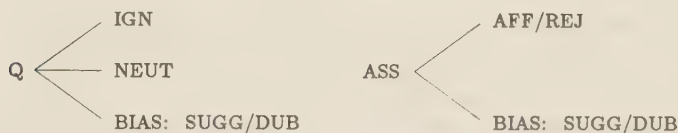
This motivates a two-dimensional modal categorization (cf. Lyons (1977) following Hare (1970)). I will call the two dimensions *domain mode* and *mode of specification*. The domain mode indicates how the speaker relates himself and his audience to a topical domain and the mode of specification indicates the speaker's commitment to a candidate specification for the topical domain. So far two values of the domain mode have been noted, the interrogative mode, which will be designated Q, and the assertive mode, designated ASS.

Also for the modes of specification only a limited number of modes will be used. Two of them represent the endpoints of affirming the specification, as in a categorial assertion, and just mentioning it, as in an unbiased question. These will be called AFF, for affirmative mode, and NEUT, for a neutral mode. In between we have an entire scale (probably multidimensional) of guarded specifications, which, for simplicity, will be classified by the single value BIAS, for a biased mode. Both affirmative and biased specifications have a definite *orientation* as positive or negative. To affirm a negative specification is to reject the corresponding basic specification, and to specify with a biased commitment in the negative is to show doubt in the specification used. When orientation is taken into account I will distinguish a rejective mode (REJ) from the affirmative mode, and a dubitative mode (DUB) from a positively biased, or suggestive (SUGG) mode. Finer distinctions than these will,

however, not be made.

When a Wh-phrase is used instead of a candidate specification, I will say that the specification is made in the Ignorative mode, or IGN, for short. For the Ignorative mode, as well as for the neutral mode, the scale of orientation is not applicable.

The values of the two modal attributes are interdependant. The different possibilities are shown below:



5.2.3 *The Universe of Discourse.* The interpretation of an utterance can only be superficial as long as the universe of discourse is not known. Without that knowledge referents of referring expressions can not be identified, the appropriate sense of a word may not be detected and it may even be difficult to see the point of the utterance.

Here I model the universe of discourse as a set of possible referents and at the same time a store of information about those referents. It is represented as a set of individuals in various relations with one another. The relations are all binary and attributed to individuals. A relation attributed to a given individual represents information about that individual. In principle, a relation can be attributed to any of its arguments and for that purpose I assume that any relation has an inverse. The inverse of an attributed relation ATTR is written ATTR-OF. The relations are represented by formulae of predicate logic in so called slot-and-filler notation and the totality of individuals and relations form an associative network (Charniak&McDermott, 1984). The individuals will therefore also be referred to as *nodes* and a set of relations that are oriented to a given individual as a *node description*. Each individual is separated from the others by a unique name.

A node description is thus a set of slots and fillers which form a DAG with the slots as attributes and the fillers as values. As with other DAGS I refer to the pair of a slot and a filler as a descriptor.

I recognize individuals of three basic kinds: tokens, types and sets. A token may be *material* or *relational*.² A material token represents an individual thing (a man, a

² - - - -

Very likely we would have to reckon with other kinds of tokens as well, such as times and locations.

chair, etc.) and a relational token an individual relation (a fact, a thought, etc.). The most important relation between types and tokens is the instantiation relation which is represented by the attribute INST (for 'Instances') in the direction from types to tokens and by INST-OF (for 'Instance of') in the direction from tokens to types.

Let us now consider two illustrations of node descriptions:

(8a)	<table><tr><td>ID</td><td>OBJ25</td></tr><tr><td>INST-OF</td><td>'Boy</td></tr><tr><td>NAME</td><td>'Erik</td></tr></table>	ID	OBJ25	INST-OF	'Boy	NAME	'Erik	(8b)	<table><tr><td>ID</td><td>REL7</td></tr><tr><td>INST-OF</td><td>'Talk-to</td></tr><tr><td>AG</td><td>OBJ25</td></tr><tr><td>COAG</td><td>OBJ38</td></tr></table>	ID	REL7	INST-OF	'Talk-to	AG	OBJ25	COAG	OBJ38
ID	OBJ25																
INST-OF	'Boy																
NAME	'Erik																
ID	REL7																
INST-OF	'Talk-to																
AG	OBJ25																
COAG	OBJ38																

Here, ID (for identity) is the attribute that takes the unique identifier of the individual as value. Identifiers are strings consisting of an abbreviation for basic kind and a number. INST-OF gives information on the type of the individual. NAME is an attribute giving information about the name of the individual. In the relational token (8b) AG and COAG are attributes representing participant roles (case roles); AG stands for Agent and COAG for Co-Agent. I do not intend to work out a full system of semantic cases here so these attributes are used for the sake of illustration only.³

It should be noted that case attributes such as AG and COAG also have inverses. The fact that OBJ25 is the agent of an act of speaking with someone else may thus be listed as a property of him by means of the attribute AG-OF as in (9):

(9)	<table> <tr> <td>ID</td><td>OBJ25</td></tr> <tr> <td>INST-OF</td><td>'Boy</td></tr> <tr> <td>NAME</td><td>'Erik</td></tr> <tr> <td>AG-OF</td><td>REL7</td></tr> </table>	ID	OBJ25	INST-OF	'Boy	NAME	'Erik	AG-OF	REL7
ID	OBJ25								
INST-OF	'Boy								
NAME	'Erik								
AG-OF	REL7								

Naturally an individual is part of many such relations. To allow for a compact notation of this, while keeping values unique, values can take the form of lists.

The value of INST-OF is an identifier of a type. A description of a type gives information on (i) its identity, as a value of ID; (ii) its nearest superordinate type, as a value of ISA, and (iii) a list of attributes and descriptors of relevance for its instances, which may be taken as a description of a typical instance. For the sake of clarity this list is separated from the other information by a line and headed by an attribute

³ -----
Other cases that will be used in the sequel are Experiencer (EXP), Possessor (POSS), and THEME, which stands for a neutral case.

INST:. An illustration is given in (10):

(10)	ID	'Talk-to						
	ISA	'Talk						
	INST:	<table> <tr> <td>AG</td><td>[INST-OF</td><td>'Human-being]</td></tr> <tr> <td>COAG</td><td>[INST-OF</td><td>'Human-being]</td></tr> </table>	AG	[INST-OF	'Human-being]	COAG	[INST-OF	'Human-being]
AG	[INST-OF	'Human-being]						
COAG	[INST-OF	'Human-being]						

The value of one attribute may be identified with that of another attribute. In that case the relevant value is identified by means of a *path* of attributes, which is written as a sequence of attributes enclosed within angle brackets. The first member of such a sequence may also be a reference to an individual, indicating that the value should be obtained from the information attached to that individual rather than from the one which is being described. For instance, the fact that Erik is talking to his mother may be represented as in (11a) and the fact that he is talking to himself as in (11b).

(11a)	ID	REL41
	INST-OF	'Talk-to
	AG	OBJ25
	COAG	<OBJ25 MOTHER>

(11b)	ID	REL42
	INST-OF	'Talk-to
	AG	OBJ25
	COAG	<AG>

Sets have a kind of intermediate status between tokens and types. On the one hand a set may have a typical member (Mellish, 1985) and in that sense relate to its members in the same way as a type relates to its instances. On the other hand sets may also be seen as instances of particular types, i.e. there are types, such as Family, Audience, Group that particularly apply to sets. The relation between a set and its members is called MEMB, with inverse MEMB-OF. The typical member is a list of descriptors which is given as a value of the attribute MEMB:. A group of boys may be associated with the description (12).

(12)	ID	SET63
	INST-OF	'Group
	MEMB	(OBJ2 OBJ4 OBJ7)
	MEMB:	[INST-OF 'Boy]

If A1 is an attribute whose value is a list of values and A2 is an attribute which is applicable to (some of) these values, then the path <A1 A2> evaluates to a list of values. If A1 is the list (OBJ2 OBJ4 OBJ7) and A2 is applicable to each of them, then <A1 A2> is (<OBJ2 A2> <OBJ4 A2> <OBJ7 A2>). For instance, with respect

to the set of boys described in (12), the path <SET63 MEMB NAME> evaluates to a list of three names corresponding to a description such as *the boys' names*.

The practice of supplying individuals with names does some of the work that variables under the scope of an existential quantifier makes in the ordinary syntax of predicate logic. "Unidentified" individuals are only allowed within descriptions relating to typical instances or members, as in (12). There they also account for some of the referential dependency of indefinite noun phrases. To say that a noun phrase is referentially dependent on another noun phrase (or, in the jargon of predicate logic, that an existential quantifier is within the scope of another quantifier) is to say that we can not find a referent for that NP until we have a referent for the independent one. And for a description at the level of typical members there is no such referent until the description is applied to a given member. Alternatively we could use a special value of ID to indicate typical instances.

Consider a putative fact such as (13). It is reasonable to take (13) as a fact about Englishman in general. It will thus be attached to the type 'Englishman as part of the description of the typical Englishman.

(13) Every Englishman admires a woman.

(14)

ID	'Englishman
INST:	EXP-OF

INST-OF	Admire'
THEME	[INST-OF 'Woman]

This description hides a universal quantifier in the interpretation of INST:. What it says is that for any instance of an Englishman there is a woman and a relation of admiration for that woman on the part of that Englishman. To make this a bit more obvious we may rewrite (14) in the form of (15) where REL is an attribute making service for all inverse case roles. The value of REL is a list of descriptions of relations that hold for the typical instance. To indicate exactly which role the member has in that relation we make the case role explicit in the description of the relation and use a variable as a value.

(15)

INST:	REL
-------	-----

INST-OF	'Admire
EXP	?1<Inst:>
THEME	[INST-OF 'Woman]

The variable ?1<Inst:> is a kind of self-reference to the typical instance. When the description applies to a given instance, ?1<Inst:> is assigned the identity of that particular instance. In fact, in (15) the attribute INST: can be taken as a universal quantifier of a sort that binds the variable ?1<Inst:>.

However, it is not possible to treat all generalizing NPs in this fashion. A description of a typical instance may refer to another type, as in (16) interpreted as a property of Englishmen.

(16) All Englishmen admire women.

Interpreting (16) to mean that any Englishman admires any woman we need a variable which is not bound when we apply the description to a given instance of an Englishman. As this variable only ranges over women it will be written ?2<'Woman Inst:> and (16) may be represented as in (17).

(17)	[	INST:	REL	[	INST-OF	'Admire	]	]
					EXP	?5<Inst:>		
					THEME	?2<'Woman Inst:>)		

Similar variables will be needed for the description of typical members of sets. The following kinds of variables are used, where n is an integer:

?n<Memb:>	The typical member of a set, bound by MEMB:
?n<SET Memb>	An arbitrary member of SET,
?n<Inst:>	The typical instance of a type, bound by INST:
?n<'Type Inst>	An arbitrary instance of 'Type.

To end this section it may be noted that utterances are also individuals, so it is natural to describe them within the same general schema. Thus, the U-structure, the context structure and the I-structure can all be regarded as values of three different attributes in the description of an individual utterance.

5.2.4 *I-structures*. The Interpretation structure gives information on the topical domain of the utterance, the candidate specifications (if any) and the modal properties. The representation of a domain in turn makes reference to a basis and a domain concept. Domains are represented by descriptions, that contain the special attributes BASIS and DCON. They may also contain other descriptors, e.g., pertaining to definiteness/indefiniteness distinctions, as in 2.3.2.

The value of BASIS is an identifier and/or a description of an individual. The value of DCON is a path of attributes which is applicable to the basis. In the simplest cases the path consists of a single attribute. Thus, the value of DCON is a way of saying something about the basis, which is being highlighted or focused upon in the utterance. To indicate that the path of attributes here functions as a value and not in its ordinary capacity, it is "quoted", by prefixing the symbol " ' ". Someone's name, say that of OBJ25, regarded as a domain of specification is then represented as in

(11).⁴

(21) $\left[\begin{array}{cc} \text{BASIS} & \text{OBJ25} \\ \text{DCON} & \text{'<NAME>'} \end{array} \right]$

The domains should generally satisfy certain paradigmatic constraints. For example, if the domain is taken to be the person that OBJ25 is talking to in REL7, we know certain restrictions on the type of the second argument of such a relation, i.e. that it is a person. When no mention is made of these we may take them to be inherent in the domain concept, but sometimes we have more particular restrictions, as in the question (22):

(22) Vilken läkare talade Erik med? *Which doctor did Erik talk to?*

In order to take care of such paradigmatic restrictions an optional second argument of the attribute DCON is used, as in (23).⁵

(23) $\left[\begin{array}{cc} \text{BASIS} & \left[\begin{array}{cc} \text{ID} & \text{REL7} \\ \text{INST-OF} & \text{'Talk-to'} \\ \text{AG} & \text{OBJ25} \end{array} \right] \\ \text{DCON} & \left[\begin{array}{cc} \text{'<COAG>} & [\text{INST-OF} \quad \text{'Doctor}] \end{array} \right] \end{array} \right]$

It is possible that (22) is uttered in a context where a set of doctors is understood. This would be even more evident in case the question was worded as in (22'):

(22') Vilken av läkarna talade Erik med? *Which of the doctors did Erik talk to?*

In that case the appropriate paradigmatic condition associated with the domain would be membership in the known set of doctors, which would be expressed by a descriptor of the form [MEMB-OF SET₁].

Given an utterance it is always a problem to determine a relevant basis in the universe of discourse. Even if the utterance contains constituents that are obviously meant to refer to particular individuals of the universe of discourse, it may not always be

⁴ We could think of the application of angle brackets to the attribute under DCON as a kind of abstraction, though with the differences noted in 2.3.2. Thus, (11) translated to a logical language with abstraction would become $\lambda x \text{ NAME}(\text{OBJ25}, x)$.

⁵ Using the λ -operator (23) could be written $\lambda x \text{ COAG}(\text{REL7}, x) \wedge \text{INST-OF}(x, \text{'Doctor'})$.

possible for an interpreter to determine their referents. Still it is possible for him to grasp certain relations between these referents. If I overhear a question such as (24), I may not know who is referred to by the expression *läkaren* (the doctor), but I will nevertheless understand how that doctor is implicated in the question. And if that doctor is referred to further on in the conversation, I will understand who is being referred to.

(24) Talade du med läkaren?

Did you speak to the doctor?

To account for this we allow the interpreter to identify an individual on the basis of a reference to it, i.e. to construct an individual, with its own identity, from a description given in an utterance. This is in fact what usually must be done with indefinite noun phrases. If the interpreter has sufficient knowledge of the universe of discourse he may be able to match that description with one already existing, but otherwise it must be attached to a new individual. A possible result of this is that the universe of discourse, as seen from the point of view of an interpreter, may contain different individuals that "actually" describe the same individuals. But this is of course nothing unusual. In fact, we may assume that the interpretation of referring expressions always involves the construction of a node-description on the basis of information that can be obtained from the utterance (and its context) before a match between that description and entities of the universe of discourse is attempted.

Apart from a description of a topical domain, an I-structure also contains information on the modal aspects of the utterance. DMODE, for domain mode, and SMODE, for specification mode, are used as attribute names for this purpose. In an I-structure DMODE is dominated by DOM and SMODE is dominated by SPEC, which is an attribute dominating all descriptors pertaining to the specifications of a topical domain.

As an example consider the utterance (25), a simple x-question about someone's name. Its I-structure is (26), where the relevant value of ID is obtained from the context structure.

(25) Vad heter han?

What's his name?

(26)

DOM	<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">BASIS</td> <td style="padding: 5px;">OBJ25</td> </tr> <tr> <td style="padding: 5px;">DCON</td> <td style="padding: 5px;">' <NAME> '</td> </tr> <tr> <td style="padding: 5px;">DMODE</td> <td style="padding: 5px;">Q</td> </tr> </table>	BASIS	OBJ25	DCON	' <NAME> '	DMODE	Q
BASIS	OBJ25						
DCON	' <NAME> '						
DMODE	Q						
SPEC	[SMODE IGN]						

Thus, (26) carries the information that the topical domain of the utterance is "the name of OBJ25", where OBJ25 is the referent of *he*, that the topical domain is put up

for specification (Domain mode Q) and that no candidate specification is given (Ignorative mode of specification). The information that the Wh-word *vad* contributes to the interpretation is thus manifested in the values of SMODE and DCON.

For an utterance of (27), say just after (25), the topical domain will be the same, but this time there is a specification. The modes are also different. The I-structure is (28).

(27) Han heter Erik.

His name is Erik.

(28)	DOM	BASIS	OBJ25
		DCON	'<NAME>
		DMODE	ASS
	SPEC	REF	'Erik
		SMODE	AFF

The attribute REF appearing under SPEC at the same level as SMODE is an attribute the value of which is the individual, or description, picked out as specification. If alternative specifications are given, the value of REF will be an enumeration of alternatives (see below, 5.3.3).

Consider next questions of the following kinds, where the Wh-phrase is not a placeholder for a specification of a case role, but for some attribute of such a specification:

(29) Hur många flaskor köpte du?

How many bottles did you buy?

(30) Vems cykel var det han hade?

Whose bike was it that he used?

It would be possible to construe the bases of such questions as relational individuals, say the fact that you bought some bottles and the fact that he came riding on a bike, respectively. If we do this it would not be possible to state the domain concept by means of a simple attribute, but it would be necessary to use a path of attributes in order to make connection with the basis. The topical domain of (39) would then be described as in (31), where THEME stands for the case role of an object towards which an action is directed and MEMB: is the attribute of a set that states properties of its typical member.

$$(31) \left[\begin{array}{cc} \text{BASIS} & \left[\begin{array}{cc} \text{ID} & \text{REL25} \\ \text{AG} & \text{OBJ2} \\ \text{THEME} & [\text{MEMB: 'Bottle}] \end{array} \right] \\ \text{DCON} & \text{'<THEME NUMBER>} \end{array} \right]$$

In (31) the basis is a relation one of whose arguments is a set of bottles. However, it would also be possible to take the set of bottles itself (and, for (30), the bike), as an individual that can be referred to and hence also be taken as a basis for a topical domain. Choosing the set of bottles as a basis will give us the following description of the topical domain:

$$(32) \left[\begin{array}{cc} \text{BASIS} & \left[\begin{array}{cc} \text{ID} & \text{SET14} \\ \text{THEME-OF} & \text{REL25} \end{array} \right] \\ \text{DCON} & \text{'<NUMBER>} \end{array} \right]$$

This description treats the relational individual in the same way as a relation expressed by a relative clause, as in (29') and (30').

(29') Flaskorna du köpte, hur många var det?
The bottles you bought, how many were they?

(30') Den där cykeln han hade, vems var det?
That bike he was using, whose is it?

These two utterances cannot be used in the same way as (29) and (30). I suspect this has to do with the thematic status of the relevant referents. But from the point of view of what is asked for there is no difference. Still, I see no harm in allowing both alternatives, although it means that we cannot restrict the value of DCON to simple attributes. The value of DCON, i.e., its first argument, is thus allowed to be a path of attributes, where the first attribute of the path must be appropriate for the basis.

5.2.5 *The Context Structure.* The format of the Context Structure has been described in 3.3, where also its attributes were introduced. As an illustration of a Context Structure, consider (33):

(33)	SPEAKER	OBJ1
	ADDR	OBJ2
	THEMES	(OBJ1 OBJ2 OBJ25)
	TOPICS	NIL
	GOALS	NIL
	BELIEFS	NIL

The SPEAKER and ADDRESSEE values are given from properties of the utterance. I assume that the participants of a dialogue are always possible themes. Apart from them a third individual, OBJ25, is thematic, someone who can be referred to by a pronoun. There are no open topics and no given goals. Such a context would be sufficient for an utterance of (25) (*Vad heter han - What's his name?*) and support the interpretation represented in (26). In fact the referent of *han* (he) would be picked up from there. Otherwise the features of the utterance carry most of the information.

The occurrence of the utterance will cause the interpreter to construct a new context structure, at least if he accepts it as a valid contribution of a dialogue. This construction also involves a monitoring of the interpreter's knowledge as it relates to the introduced topic. At this stage the Context Structure has the following content:

(34)	SPEAKER	OBJ2		
	ADDR	OBJ1		
	THEMES	(OBJ1, OBJ2, OBJ25)		
	TOPICS	DOM	[	]
			DCON	
			BASIS	OBJ25
		TERR	OBJ1/OBJ2	
		CSPEC	NIL	
		CSTAT	OPEN	
	GOALS	[...]		
	BELIEFS	[	REF	OBJ25

There has been a change in speaker and addressee, but no change in themes. A topic has been introduced, namely the name of OBJ25 and this topic has been classified as belonging to the cognitive territory (TERR) of both participants. No candidate specification (CSPEC) has so far been given on the domain and its current status (CSTAT) is open. The BELIEFS attribute has as value a relevant part of the object description for OBJ25, i.e. the part stating his name. The goal has not been specified.

5.2.6 *Types, Attributes and Lexemes.* In the I-structure (26) the verb *heta* (be called) has been interpreted by the attribute NAME, i.e. an attribute of a material token, in this case a token representing a human being. This interpretation is motivated if the utterance is taken to be about that material token and utterances containing *heta* can usually be taken that way. But we can also talk of the fact that someone is called by a certain name and this fact is a relational token. The type for this relational token, which may be called 'Be-called, would also be a possible interpretant of *heta*, as in (35):

- (35) Jag kände inte till att han hette Erik.
I didn't know that he is called Erik.

What is then the relation between the relational type 'Be-called and the attribute NAME? Well, they are essentially the same; they can encode exactly the same information, but they differ in how this information is perceived, either as a token in itself ('Be-called) or as an aspect of some other token (NAME).

The informational equivalence between 'Be-called and NAME can be stated in the description of 'Be-called, which is given in (36):

- (36)

ID <u>ISA</u>	'Be-called 'Have1						
INST:	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: top;">POSS</td> <td style="vertical-align: top;"> <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: top;">INST-OF NAME</td> <td style="vertical-align: top;">'Human-being <INST: THEME></td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: top;">THEME</td> <td style="vertical-align: top;">[INST-OF 'Name]</td> </tr> </table>	POSS	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: top;">INST-OF NAME</td> <td style="vertical-align: top;">'Human-being <INST: THEME></td> </tr> </table>	INST-OF NAME	'Human-being <INST: THEME>	THEME	[INST-OF 'Name]
POSS	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: top;">INST-OF NAME</td> <td style="vertical-align: top;">'Human-being <INST: THEME></td> </tr> </table>	INST-OF NAME	'Human-being <INST: THEME>				
INST-OF NAME	'Human-being <INST: THEME>						
THEME	[INST-OF 'Name]						

The structure dominated by INST: in (36) says that an instance of the relation 'Be-called holds for a possessor and a theme iff the name of the possessor is in fact equal to the theme. The path <INST: THEME> here indicates the value of the path given by the included attributes. This means that as soon as a relational token of the type 'Be-called is introduced, a NAME-descriptor can be added to the description of the possessor argument. Conversely, from a token with a NAME-descriptor we can construct the corresponding relational token.

Types are related to entries in the lexeme lexicon. A lexeme can be regarded as a relation between a structure of stems and a type. For instance, the lexeme *heta* links a morphosyntactic stem to the type 'Be-called and gives information on the correspondences between grammatical functions and arguments, as in (37).

(37) <i>heta</i> ;	[CAT V]	↔	'Be-called, with
	NP[GF Subj]	↔	POSS
	NP[GF Pred]	↔	THEME

To see how lexemes are used, let us derive an interpretation of the utterance (27), repeated here for convenience.

(27) Han heter Erik.

His name is Erik.

The grammar will identify the first constituent as a subject and the last one as a predicative complement. For the first constituent, *han*, a node-description is constructed, which gives the information that the potential referent is of male sex (38).

(38)	[	INST-OF	'Human-being	]
		SEX	'Male	

The rule for interpretation of *han* instructs us to look for such a referent in the context structure and more exactly in the set of values for the attribute THEMES. Assuming that OBJ25 is found as that referent we unify the two node-descriptions, giving us a node-description (38') with more information than (38). In particular it has a value for the ID-attribute.

(38')	[	ID	OBJ25	]
		INST-OF	'Human-being	
		SEX	MALE	

As the verb is encountered we start to construct an object-description representing a relation between OBJ25 and the argument having the Predicative function. The description of *Erik* may be as in (39), where 'Name is a type the instances of which are themes of 'Be-called relations, something which implies that they can be described of a NAME-OF relation. The description for 'Name is shown in (30). The value of INST: in (30) is a list (redundantly) showing the two possibilities.

(39)	[	ID	'Erik	]
		INST-OF	'Name	

(40)	ID		'Name
	INST: { [TH-OF [INST-OF 'Be-called]] / [NAME-OF [INST-OF 'Human-being]] }		

It is now time to consider the information structure of the utterance. Given that the referent of *han* was a prominent theme we take the topical domain to have that referent as basis. Thus the value of BASIS is set to OBJ25. Consequently, we interpret *heta* in terms of NAME rather than 'Be-called. The specifying expression of the utterance is *Erik*, which is expressed within a declarative clause with assertive intonation. A lexeme relates the stem *Erik* to the token 'Erik given in (49). Modal rules interpret the tone and the clause-type in terms of the DMODE-value ASS and the SMODE-value AFF. The result is the I-structure that was shown above, i.e. (28).

(28)	DOM	<table><tr><td>BASIS</td><td>OBJ25</td></tr><tr><td>DCON</td><td>'<NAME></td></tr><tr><td>DMODE</td><td>ASS</td></tr></table>	BASIS	OBJ25	DCON	'<NAME>	DMODE	ASS
BASIS	OBJ25							
DCON	'<NAME>							
DMODE	ASS							
	SPEC	<table><tr><td>REF</td><td>'Erik</td></tr><tr><td>SMODE</td><td>AFF</td></tr></table>	REF	'Erik	SMODE	AFF		
REF	'Erik							
SMODE	AFF							

Since the lexeme 'Erik has the property of being a value of the attribute NAME, it fits the expressed domain and the interpretation can be accepted. This does not necessarily mean that the information should be accepted as true. The latter is a matter of decision. If the interpreter accepts the given specification he will reconstruct his universe of discourse, which in this case means, that a new descriptor can be added to the individual OBJ25 and perhaps a node representing the fact that the name of OBJ25 is 'Erik should be created. Of course, if the interpreter already knew this, there is no need for it to make such a reconstruction. What may be reconstructed is then the interpreter's knowledge about the knowledge of its interlocutor.

5.2.7 Polarity and Sub-universes. The universe of discourse cannot be regarded as an homogenous mass of individuals. We can talk about individuals that exist as well as about individuals that do not exist, but which someone may believe to be existing, or which are planned to come into being in the future. We must also distinguish between what we are doing and what we want to do. Thus we need something like the logicians' possible worlds or the mental spaces of Fauconnier (1985).

I will refer to such clusters of individuals which have a specific mode of existence as *sub-universes*. A sub-universe may be regarded as a set, but I shall regard sub-universes as a basic kind of its own, since ordinary sets do not generally comprise

both material and relational tokens. The relation between a sub-universe and the individuals that belong to it will be designated IND (an abbreviation for individuals). Its inverse is, as usual, IND-OF.

The sub-universes are related to each other in various ways. Most important are the relations to the real sub-universe. I take it as a normal case that a dialogue concerns the real sub-universe and a domain whose basis is a real individual will not be specially marked in any way. If the basis of a domain is not a real individual, however, but an individual of some other sub-universe it is important that the domain is marked accordingly. For instance, if we are talking about an individual that someone, say OBJ25, believes to exist, that individual could be marked by the descriptor (41).

(41) [IND-OF [BELIEFS-OF OBJ25]]

To say of a relational individual that it is an individual of the real sub-universe is, in effect, to say that it is a fact. Facts may be either positive or negative; e.g., it may be a fact that someone is called Erik and it may be a fact that he is not called Erik. To distinguish between positive and negative facts, relational tokens are all assigned an attribute, POL, that pertains to their polarity as positive or negative. For a positive token this attribute will not be listed in its description. I thus employ the same convention as most natural languages.

The interpreter is assumed to keep negative facts only if there is no positive alternative. If the only thing I know about a person's name is that it is not, say, John, then I may note that as a fact. But if I later get to know that he is called Erik, then there is no need to keep the negative fact, as it can be deduced. Furthermore, I assume that the interpreter generally ascribes the same real sub-universe to others, as it uses itself. It is a marked case that someone else believes different things from you.

It should be noted that the relational individuals of the universe are either facts or beliefs, hopes, dreams, planned events and so on. They are not as abstract as propositions, which may be true or false in any sub-universe, but are always attached somewhere and through this attachment have a special relation to the real sub-universe. Consequently, predicates such as *tro* (believe) and *sann* (true) are not regarded as having propositions as arguments. An utterance of (42) is analysed as ascribing to John a belief about the shape of the earth. If the interpreter accepts that information it constructs a relational individual corresponding to that belief, it does not construct a relation between John and a previously constructed proposition. In the same vein, I take (43) to have a belief, or hypothesis or whatever, in any case an attached relational individual as a basis, and assert that this belief does not correspond to a fact.

(42) John tror att jorden är platt.

John believes that the earth is flat.

(43) Det är inte sant att jorden är platt.

It is not true that the earth is flat.

5.3 Rules of Interpretation and their Application.

The general format of an I-structure that we have arrived at is the following:

$$(44) \quad \left[\begin{array}{c} \text{DOM} \\ \\ \text{SPEC} \end{array} \left[\begin{array}{c} \text{BASIS} \quad \dots \\ \text{DCON} \quad \dots \\ \text{DMODE} \quad \dots \\ \\ \text{SMODE} \quad \dots \\ \text{REF} \quad \dots \end{array} \right] \right]$$

The dots in (44) indicate the values that must be obtained in the interpretation process. Generally speaking, the linguistic and the contextual properties are both necessary sources of evidence, but the weight is distributed differently for different attributes. The modal values are usually indicated in the utterance in some way or another, although territorial properties of the domain also play a part. However, it would be wrong to conclude that illocutionary force is primarily a matter of surface signals; the modal values have no relevance except in relation to domains and specifications.

5.3.1 Modal Interpretation. The interrogative tone and, in written language, the question-mark are, although not entirely unambiguous, strong indicators of questions. Thus, they will be associated with the interpretation [DMODE Q] in the lexicon as the primary alternative. The scope of these signals is in principle the unit (sentence or sentence fragment) they occur with.

Main interrogative clauses and Wh-clauses are certainly common vehicles of questions, but they rarely occur without an interrogative tone when they are so used. Therefore it is strictly speaking not necessary to interpret them in terms of a particular value of DMODE. Nevertheless, they have such strong associations with questions that such an interpretation is motivated. It should be recognized, though, that the number of alternative interpretations is greater for an interrogative clause than it is for an interrogative tone, i.e. the interrogative clause-type is weaker than the interrogative tone as interrogative signal.

Subordinate interrogative clauses and subordinate ignorative Wh-clauses usually carry no particular tone. In this case, therefore, the structural properties must be interpretable in terms of DMODE-values. They are not unequivocal, however, and a question interpretation requires support from the context (in this case often co-text). For subordinate interrogative clauses the interpretation [DMODE Q] is primarily associated with the interrogative complementizers *om*, *ifall* and *huruvida*. Its scope is the whole clause.

A declarative clause is compatible with a question interpretation, yet it is certainly much more used in assertions. It is natural to associate it primarily with the interpretation [DMODE ASS], but we must be careful not to invoke it unnecessarily. Unlike interrogative clauses declarative clauses allow for modifications and additions which have strong effects on the modal interpretation of the utterance. One way to account for this is to treat modal values, in particular ASS, as replaceable in the interpretation process. Another way is to treat them as default values; if there are no other signals suggesting a different mode, we interpret a declarative clause as having assertive mode. This is the solution I adopt. A default value is indicated by an index of inferential strength, <def>.

Defaults are applied also in the case of modes of specification. The SMODE-default of a declarative clause is AFF and that of an interrogative clause is NEUT.

Modal rules can be stated as associations (or productions) between descriptors of the utterance structure and descriptors of the corresponding I-structure. As all rules of interpretation they are inferential in nature and their application needs corroboration. They may be context-sensitive. The context in which an association applies is marked off by the symbol '/'. Note that the associations in themselves do not tell us how to identify a corresponding I-structure to a given U-structure.

The rules that have been stated informally above, can then be stated as below. Alternative interpretations will be discussed when we consider the polysemy of interrogative features in chapter 6.

I. Modal interpretation of tones:

- (a) [TONE ?] ==> [DMODE Q]
- (b) [TONE .] ==> [DMODE ASS<def>]

II. Modal interpretation of clause-types:

- (a) [SFORM Decl] ==> [DMODE ASS<def>, Q]
[SMODE AFF<def>, BIAS]
- (b) [SFORM Int] ==> [DMODE Q]
[SMODE NEUT<def>, BIAS]
- (c) [SFORM WhI] ==> [DMODE Q]
[SMODE IGN]

III. Modal interpretation of complementizers.

- (a) [COMP *om*] ==> [DMODE Q]
[SMODE NEUT<def>, BIAS]
- (b) [COMP *att*] ==> [DMODE ~Q]

IV. Modal interpretations of certain lexical items. (Illustrations).

- (a) *eller hur, inte sant, väl* ==> [SMODE BIAS]
- (b) *inte* / [SFORM Int] ==> [SMODE SUGG]
inte / [SFORM Decl] ==> [SPEC [POL NEG]]
- (c) *ja* ==> [[DMODE ASS] [SMODE AFF]]
nej ==> [[DMODE ASS] [SMODE REJ]]

5.3.2 *Domains and Specifications.* The topical domain of an utterance may be expressed in the utterance, be partially expressed or not at all expressed. In the latter case the utterance constitutes a specification of the topical domain, whose domain concept is implied by the given specification, but whose basis must be gathered from the context. Furthermore, even when the basis is expressed in the utterance itself, it is usually not apparent which elements of the utterance express the basis and which do not. The clause-types which are most transparent as regards this aspect of information structure are the Wh-clauses.

With Interrogative and Declarative clauses sentence accent helps determine the domain and the specification. But matching against the context and the universe of discourse is necessary, even more so in written language of course, where there is no prosodic marking. Identification of information structure is also helped by structural and lexical signals, such as disjunctions, specifications of a low degree of specificity and adverbial elements with scope such as the negation and contrastive, emphatic or conjunctive adverbials.

The topical domain of an utterance is determined by the way the utterance makes connections with the context, in particular by what individuals are implicated and their thematic status. We may distinguish four different types of connection:

- * Connection with the universe of discourse,
- * Connection with thematic individuals,
- * Connection with a closed topic,
- * Connection with an open topic.

This taxonomy is based on the observation that the possibilities of expression differ depending on the existence of topical domains and thematic individuals in the context-of-utterance. However, there are also more general principles at work in determining topics.

Utterances differ in how many individuals they implicate.⁶ In the simplest cases only two individuals are implicated, one material and one relational. This is true for utterances such as the following:

- | | |
|-------------------------|---------------------------------|
| (45) Vad heter du? | <i>What is your name?</i> |
| (46) Vem talade du med? | <i>Who were you talking to?</i> |
| (47) Korpar är svarta. | <i>Ravens are black.</i> |

With (45) the speaker refers to the addressee (a material individual), but the fact that he/she has a name (a relational individual) is also implicated. Yet it seems intuitively clear that the addressee should be taken as the basis, since names are generally attributed to people. (46) also refers to the addressee and a fact, viz. the fact that the addressee is speaking to someone. In this case, however, it is not just the addressee that seems to constitute the basis, but the fact as a whole and the domain concerns the identity of a part of that fact. The reason for this seems to be that people we are talking to cannot be attributed to us in the same way as names.

(47), in my analysis, states a relation between two types and implicates the fact that ravens have a definite colour. Still it is clear that the raven type is preferably taken as the basis in an unmarked context with Colour as domain concept. The reason for this I think we must attribute to the fact that we use colours to distinguish (or characterize) birds, but not birds to distinguish (or characterize) colours.

We can surely imagine utterances that introduce more than one individual or type and for which our intuitions are less clear as regards the choice of basis. The purpose of these examples was, however, to show that the choice of basis is influenced by a number of factors apart from the current themes and topics of a given dialogue. There seems to exist a general knowledge of how the information expressed (or sought) in an utterance should be attributed. I am not able to make that knowledge explicit in the following rules for determining topical domains; I rather assume its existence. The rules are not mutually exclusive; instead they state possibilities which sometimes are compatible.

In the rules D is used as an abbreviation for a domain, B for a basis and C for a domain concept. S is used as short for a candidate specification and WH for a specification placeholder.

⁶

The term *implicate* is here used in its ordinary sense, not in the sense of Grice (1975).

I. Rules of Connection with the Universe of Discourse.

(a) If an utterance makes reference to an individual, B, as well as a specification, S, or placeholder, WH, which is associated with a domain concept, C, which is appropriate for B, e.g., as evidenced by its type, then hear it as having the topical domain B-C.

The essence of this rule is that something can be taken as a basis only if the rest of the utterance contributes information that is known to be applicable to that type of thing. It applies to (44)-(46) above. Note that material and relational tokens as well as types may serve as bases.

Next consider a question such as (48), which may be heard in a Quiz show (cf. (29) and (30) above).

- (48) Vad heter regissören till Lawrence av Arabien?
What is the name of the director of Lawrence of Arabia?

If we take the director to be the basis of this question, rule (a) would apply as it stands. But we could also take the film as basis and construct a complex domain concept "name of director of". To allow for this possibility we have the following rule:

(b) If an utterance makes reference to an individual, B1, and some other individual, B2, which has an appropriate relation to B1 via the domain concept C1 and a specification or placeholder that is associated with a domain concept, C2, appropriate for B2, then hear the utterance as having topical domain B1-C, where C is the combination <C1 C2> of C1 and C2.

The final rule concerns the case where several of the individuals referred to as arguments of the predicate are equally "basic".

(c) If an utterance makes reference to two or more individuals that are equally likely to serve as bases, and a specific relation, S, of superordinate type S', i.e. related to S through the attribute ISA, then hear it as having a relational basis with the individuals as arguments and the domain concept INST-OF, restricted by S'.

The impact of this rule is that if an expressed predicate cannot be attributed to anyone of the argument individuals it should be taken as a candidate specification for the relation of appropriate type that presumably holds between the arguments. Consider (49)-(50) as illustrations.

- | | |
|--------------------------------------|---|
| (49) Är Erik och Eva kusiner? | <i>Are Erik and Eva cousins?</i> |
| (50) Rött vin passar inte till fisk. | <i>Red wine does not go well with fish.</i> |

A question such as (49) could be answered by *yes*, but if one answers by a *no* one is likely to add some information on the correct relationship between the two individuals

Erik and Eva, e.g., that they are brother and sister. This indicates that the informational interest is with their relationship and that the predicate *vara kusiner* (be cousins) is offered as a candidate specification for this relation. Thus the basis of this question would be the presumed fact that the two persons are related in some way and the domain concept INST-OF points to the exact nature of this relationship.

(50) can be analysed in the same way if we assume a context where the notions 'red wine' and 'fish' have no special thematic status.

II. Rules of connection with themes.

The rules for making connection to themes are not very different from those of making connexion to non-themes. It should be noted though that thematic individuals can be referred to implicitly. For instance, if a film is thematic, either because it has already been talked about or because you are in a cinema to watch it, you may simply ask (48') instead of (48).

(48') Vad heter regissören?

What is the name of the director?

So in that case the basis (or at least a part of it), must be picked up from the set of themes.

A thematic individual is generally more likely to be part of, or constitute, the basis than a non-thematic one. Thus, (51) may be taken to assert information about what the subject referent is presently doing, assuming the wife to be non-thematic. (52), on the other hand is likely to assert information on how the object referent is going to get to the station, assuming the station but not the husband to be thematic. These are not necessary interpretations, but they are strongly suggested. (53), where both the husband and the wife are thematic can more easily be taken either way.

(51) Han kör sin fru till stationen.

He is driving his wife to the station.

(52) Hennes man kör henne.

Her husband is driving her.

(53) Han kör henne (till stationen).

He is driving her (to the station).

The rules for making connection with themes will be formulated in the same way as the rules for making connection with the universe of discourse. I will also state an additional rule, which seems to apply primarily to thematic individuals. Since the first three rules are similar to the general rules they could perhaps be integrated into them, but I will nevertheless state them separately. The rules concerning themes have a priority in relation to the general rules in the following sense: if the utterance makes reference to a theme, then apply the rules for making connection with themes.

(a) If an utterance makes explicit or implicit reference to a thematic individual, B, as well as a specification, S, or placeholder, WH, which is associated with a domain

concept, C, which is appropriate for B, e.g., as evidenced by its type, then hear it as having the topical domain B-C.

The additional rule applies to utterances such as (54)-(55):

- | | |
|----------------------|----------------------------------|
| (54) Och du vill ha? | <i>And you want?</i> |
| (55) Adressen? | <i>(Your, his, ...) address?</i> |

Here there is neither specification nor Wh-word, yet the domain concept can easily be determined.

(a') If the utterance makes explicit or implicit reference to a thematic individual, B, and expresses or otherwise indicates a domain concept, C, then hear the utterance as having topical domain B-C.

The rules II(b) and II(c) are exactly as I(b) and (Ic) apart from the difference that a reference to a theme may be implicit.

III. Rules of connection with a closed topic.

On the closure of a topic it may be that the interpreter constructs some new individuals and reconstructs some old ones. These individuals are possible themes of the continuing discourse. So in order to continue a discourse about them it may be sufficient to make connection with them simply as themes. However, it seems that the information structure of a closed topic can be manipulated in direct ways and I therefore state specific rules for this. Basically, the structure of a closed topic in terms of basis, B, and domain concept, C, can be carried over to the next utterance in one of four ways:

- | | | |
|-----|---------------------------------|--------------------------|
| (a) | $(B, C) \rightarrow (B', C)$ | |
| (b) | $(B, C) \rightarrow (B, C')$ | |
| (c) | $(B, C) \rightarrow (B', C')$, | where $B' = B + S_{(C)}$ |
| (d) | $(B, C) \rightarrow (B, C)$ | |

The connections that accomplish these effects are the following:

(a) *Substitution*. If D is a topical domain with structure (B, C) that has been closed in an immediately preceding utterance and the next utterance provides a specification, S', that may be taken either to express an alternative basis to B, or an alternative to some part S of B, then hear the utterance as having domain (B', C), where B' is the result of replacing B or S, as the case may be, by S'.

- | | |
|---------------------------|--------------------------------|
| -Vid sextiden. | - <i>Around six.</i> |
| -Jag kommer vid sextiden. | - <i>I'll come around six.</i> |
| -När filmen börjar. | - <i>When the film starts.</i> |

(b) If there is an open topical domain, D, with current specification S, and the utterance consists of a specification evaluator such as *ja* (yes), *nej* (no), *kanske* (perhaps) or *antagligen inte* (probably not), then take the utterance as having topical domain D.

It is also possible to introduce a new topical domain by way of reference to an existing open topic, as in the following dialogue:

- | | |
|--|---|
| (57') A: Var träffades ni första gången? | <i>Where did you meet for the first time?</i> |
| B: Ja, och hur gick det till? | <i>Yes, and how did it happen?</i> |

As a result there will be two topical domains to attend to in the dialogue.

The rule that accounts for this case is given below. It could possibly be integrated with rule III(b) above for closed topics.

(c) If there is an open topical domain, D, with basis B, and the utterance introduces a new domain concept, C, appropriate for B by a placeholder, WH, then hear the utterance as having topical domain (B,C).

5.3.3 *Illustrations.* In this section the interpretation of a set of simple utterances will be described. They are simple in the sense that they only contain one predicate and only involve token individuals. They all relate to the same topical domain, namely the name of a given person, but differ in the way the domain is indicated and in the information given. The range of illustrations will cover all the Swedish interrogative structures that are applicable to such simple domains with the purpose of showing how the interrogative structures function as question vehicles. More complex cases are discussed in 5.3.4-5.3.6.

Let us first consider the simple dialogue constituted by (25) and (27), the two utterances whose I-structures we discussed in 5.2.

- | | |
|----------------------|---------------------------|
| (25) Vad heter han? | <i>What is he called?</i> |
| (27) Han heter Erik. | <i>He is called Erik.</i> |

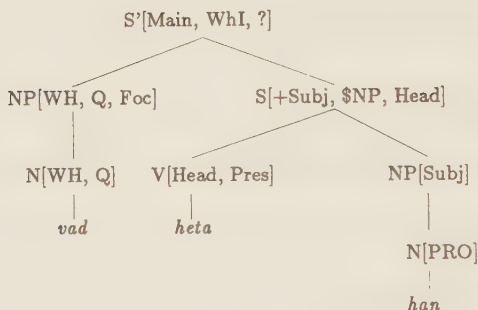
A suitable context for this dialogue is one where the referent of *han* is given as a theme. The relevant part of the Context Structure is shown in (60). Relevant aspects of the U-structure assigned by the grammar to (25) is shown in (61). The information on the nodes of the U-structure is given in the form of value lists. The values of the attribute STEM is shown as formatives on terminal nodes as is usual in syntactic

trees.

(60) THEMES

ID	OBJ25
INST-OF	'Boy
SEX	'Male

(61)



From the values of SFORM and TONE we can infer domain mode Q for (25). The value of SFORM furthermore indicates an ignorative mode of specification (Modal rules I(a) and II(c)). The information structure is determined according to Connection rule II(a), since the referent of *han* is thematic. Given that OBJ25 has been assigned as this referent, Connection rule II(a) also allows us to take this individual as a basis for the topical domain of the utterance. The verb *heta* is related to the attribute NAME through its lexical entry, shown above in (37) and the information connected with the type 'Be-called, as in (36). The lexical entry (37) associates the second argument of 'Be-called, and hence the value of the attribute NAME with an NP-constituent of predicative function. There is no constituent with predicative function in (60), however. Still, the Wh-phrase will be interpreted as associated with that attribute, since the grammatical function Focus works as a placeholder in the interpretation procedure, i.e. it matches any condition on the GF-attribute in a lexical entry. Thus, there will be a match between displaced constituent and argument as long as there is an argument without assignment and conditions on other descriptors are met. The result of this constructive process is the I-structure (26):

(26)

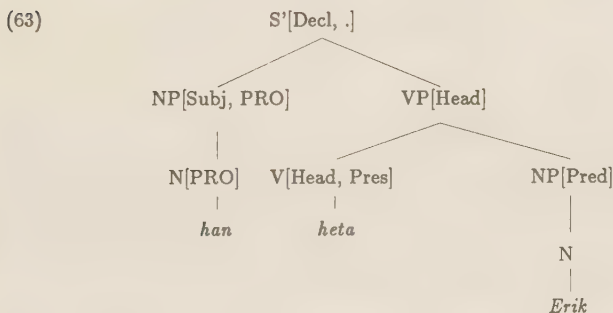
DOM	BASIS	OBJ25
	DCON	'<NAME>
	DMODE	Q
SPEC	[SMODE	IGN]

If (25) is accepted under this interpretation there will be an established open topic to interpret (27) against. The information connected with this topic is shown in (62), which is a part of the Context Structure (34) shown above.

(62)

DCON	NAME
BASIS	OBJ25
TERR	OBJ1/OBJ2
CSPEC	NIL
CSTAT	OPEN

The U-structure of (27) is (63). Its TONE and SFORM both indicate that (27) has assertive domain mode and affirmative mode of specification (Modal rules I(b) and II(a)). The result is the I-structure (28). It should be noted that the same rules allows us to derive the I-structure (28) also for a simple answer *Erik*, pronounced with assertive tone. Connection rule IV(a) does not require that the domain is retraced and an assertive tone is sufficient to interpret the utterance as being assertive and affirmative.



(28)	DOM	BASIS	OBJ25
		DCON	'<NAME>
		DMODE	ASS
	SPEC	REF	'Erik
		SMODE	AFF

Next consider nexus-questions like the following uttered in a context where the referent of *han* is among the themes, i.e. where the Context Structure contains the theme (60).

- | | |
|---------------------------------|-------------------------------------|
| (64) Heter han ERIK? | <i>Is he called ERIK?</i> |
| (65) Heter inte han ERIK? | <i>Isn't he called ERIK?</i> |
| (66) Han heter ERIK, inte sant? | <i>He is called ERIK, isn't he?</i> |

The derivation of the domain for these utterances follows the same rule as for (35), i.e. rule II(a). The only difference is that (64)-(66) provide a specifying expression (*Erik*) instead of a Wh-phrase. They all have the same value for the attribute SPEC, but differ slightly in the modal values and in the way they are determined.

(64) is a Plain interrogative clause. Its U-structure contains the descriptor [SFORM Int] at top level, which by the default case of modal rule II(b) is interpreted in terms of a neutral mode of specification. Its I-structure is (67).

(67)	DOM	BASIS	OBJ25
		DCON	'<NAME>
		DMODE	Q
	SPEC	REF	'Erik
		SMODE	NEUT

The interpretation of (65) is exactly like (64) with the exception that the negation *inte* shows a bias of the speaker towards the mentioned specification. This bias shows up as the value of SMODE according to modal rule IV(b). The only difference between an I-structure for (65) and (67) is thus that the former has the descriptor [SMODE SUGG] instead of [SMODE NEUT].

It should be noted that the negation in the interpretation is not associated with the specification, as it would be for a negative assertion. (68a) is an appropriate reaction to (65), but (68b) is not.

- | | |
|----------------------|-----------------|
| (68a) Gör han (det)? | <i>Does he?</i> |
|----------------------|-----------------|

(68b) @Gör han inte (det?)

Doesn't he?

In the context of a negative assertion, such as (69), (68a) would be out, whereas (68b) makes sense.

(69) Han heter inte ERIK.

He is not called ERIK.

(68a) @Gör han (det)?

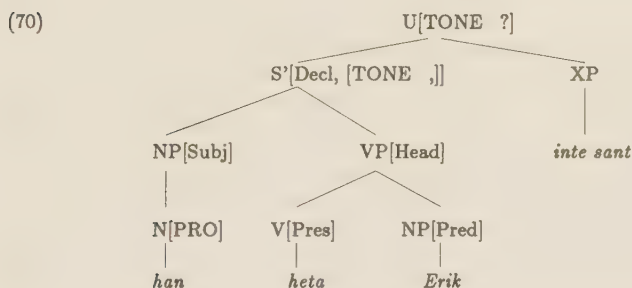
Does he?

(68b) Gör han inte (det)?

Doesn't he?

The U-structure for (69) differs from (68) both in clause-type and tone. The effect of this is a change in both modal values and also an effect in the interpretation of the negation. In (69) the negation is interpreted as rejecting the specification 'Erik'.

The I-structure of (66) is exactly the same as the I-structure of (65), but derived by different rules. The U-structure of (66) is (70):



The marked tone suggests that the domain mode is Q. The comma-tone of the clause carrying the tag is indifferent to modal interpretation. The tag on the other hand introduces a biased mode of specification (modal rule IV(a)), in this case a suggestive mode, since the clause is positive. Since a declarative clause is compatible with a suggestive mode, this interpretation stands.

To all of (64)-(66), (71) is a possible reply:

(71) Nej, SVEN.

No, SVEN.

This utterance is directly addressed to the open topic introduced by the previous utterance. The topical domain can be described by the structure (72):

(72)	DCON	'<NAME>
	BASIS	OBJ25
	TERR	OBJ1/OBJ2
	CSPEC	'Erik
	CSTAT	OPEN

The *No* counts as a rejection of the current specification and the following specification as an affirmation of an alternative. That it is an affirmation follows from the tone and its domain is given by the connection rule IV(a). Thus, the *No* of (71) is equivalent to an utterance of (69) in the given context.

We could regard the two parts of (71) as separate units and assign them an I-structure each. Since they have the same domain, however, we could assign it an I-structure with an enumeration of values for SPEC, as in (73).

(73)	DOM	BASIS	DCON	DMODE	OBJ25	'<NAME>	Q
	SPEC	1	REF	SMODE		'Erik	REJ
		2	REF	SMODE		'Sven	AFF

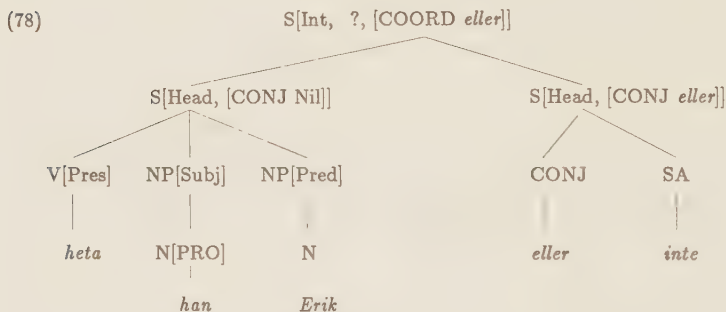
Next consider an ordinary, alternative question, as in (74) with the U-structure (75). The coordinated phrase is described according to the rules of 4.3.4.6.

(74) Heter han Erik eller Sven? *Is he called Erik or Sven?*

candidate specification and its negation. Although the syntactic analysis of the utterance registers it as a coordination of two clauses, one reduced to the negation *inte*, the interpretation associates the negation with the specification of the topical domain, *Erik*. This is possible, because the information structure is evident from the first clause in the given context.

(77) Heter han Erik eller inte?

Is he called Erik, or not?



(79)

DOM	BASIS	OBJ25
	DCON	'<NAME>
	DMODE	Q
SPEC	SMODE	NEUT
	CMODE	ALTS
1	REF	'Erik
2	REF	'Erik
	POL	NEG

The polar alternative question is thus analyzed as providing two opposing specifications for the same domain. I have used the same value for the CMODE-attribute as for an ordinary alternative question.

The first illustration concerned the Main Plain Wh-clause (35). There are many other ways of forming the same x-question, however. Some of the possibilities are given in (80)-(85).

(35) Vad heter han?

What is he called?

- | | |
|-----------------------------|--|
| (80) Han heter vad? | <i>He is called what?</i> |
| (81) Vad heter han för nåt? | lit. <i>What is he called for something?</i> |
| (82) Vad har han för namn? | lit. <i>What has he for name?</i> |
| (83) Vilket är hans namn? | <i>What is his name?</i> |
| (84) Hans namn? | <i>His name?</i> |
| (85) (Och) han heter? | <i>(And) he is called?</i> |

The utterance structure for (80), a non-inverted Wh-clause, differs from that of (35) only in the position of the Wh-phrase. In a simple clause like this this change has no effect on either the modal interpretation or the information structure. Given a context where the referent of *han* is thematic the I-structure of (80) is exactly the same as for (35).

The Wh-Indefinite clause of (81) differs from (35) in the elaboration of the Wh-phrase. This elaboration just contributes redundancy to the interpretation and the same interpretative rules can be used.

(82) is also a Wh-Indefinite clause, but uses a different predicate, *ha ... (ett) namn* (have ... a name). In order to account for the equivalence, this predicate, just as *heta*, must be related to the attribute NAME. Let us assume that *namn* has the lexical entry (86), where the type 'Name is as in (60).

(86) *namn*; [CAT N] ↔ 'Name

(60)

ID	'Name
INST:	{ [TH-OF [INST-OF 'Be-called]] / [NAME-OF [INST-OF 'Human-being]] }

The meaning of (60) is that any instance of a name is in the relation NAME-OF to a human being, which is to say that the name is a value of a NAME-attribute attached to that human being.

When the stem *namn* is encountered in an NP, we may interpret it as a reference to a name, i.e. something which instantiates the type 'Name. In combination with a Wh-word, as in *vad ... för namn* or *vilket namn*, it suggests the interpretation of a non-specified, ignored name. The relation of that name to its context must be gathered from other elements of the utterance, and the context. In (82) the most immediate element in the utterance is *ha*.

The verb *ha* has many uses, but one of them is as a predicate relating an object to one of its typical properties or attributes. There are plenty of constructions similar to (82):

- | | |
|------------------------------|--------------------------------------|
| (87a) Vad har den för färg? | <i>What colour is it?</i> |
| (88a) Vad har du för adress? | <i>What's your address?</i> |
| (89a) Vad har hon för jobb? | <i>What kind of job has she got?</i> |

To these questions one may in Swedish give answers containing the same construction with *ha*, as in (87b)-(89b) or an answer with a different verb as in (87c)-(89c). The latter often sound more idiomatic. Yet there is an equivalence between the different types of expression to account for.

- | | |
|---|--|
| (87b) Den har blå färg. | <i>lit. It has got blue colour.</i> |
| (88b) ?Jag har adressen Kungsgatan 12. | <i>lit. I've got the address K.</i> |
| (89b) Hon har ett jobb på en städfirma. | <i>She's got a job with a cleaning company</i> |
| (87c) Den är blå. | <i>It is blue.</i> |
| (88c) Jag bor på Kungsgatan 12. | <i>My address is Kungsgatan 12.</i> |
| (89c) Hon är kontorist. | <i>She is a clerk.</i> |

Suppose then that *ha* as one alternative has the lexical entry (90), where 'Have1 in turn has the description (91).

- | | | |
|------------------|---------------|---------------|
| (90) <i>ha</i> ; | [CAT V] ↔ | 'Have1, where |
| | NP[GF Subj] ↔ | POSS |
| | NP[GF Obj] ↔ | THEME |

- | | | | | | | | | | | | | | |
|-------|--|---------|----------|---------|-------|--|---------|----------|---------|-------|----------|---------|--|
| (91) | <table border="0"> <tr> <td>ID</td> <td>'Have1</td> <td></td> </tr> <tr> <td>INST:</td> <td> <table border="0"> <tr> <td>POSS</td> <td>[INST-OF</td> <td>'Being]</td> </tr> <tr> <td>THEME</td> <td>[INST-OF</td> <td>'Thing]</td> </tr> </table> </td> <td></td> </tr> </table> | ID | 'Have1 | | INST: | <table border="0"> <tr> <td>POSS</td> <td>[INST-OF</td> <td>'Being]</td> </tr> <tr> <td>THEME</td> <td>[INST-OF</td> <td>'Thing]</td> </tr> </table> | POSS | [INST-OF | 'Being] | THEME | [INST-OF | 'Thing] | |
| ID | 'Have1 | | | | | | | | | | | | |
| INST: | <table border="0"> <tr> <td>POSS</td> <td>[INST-OF</td> <td>'Being]</td> </tr> <tr> <td>THEME</td> <td>[INST-OF</td> <td>'Thing]</td> </tr> </table> | POSS | [INST-OF | 'Being] | THEME | [INST-OF | 'Thing] | | | | | | |
| POSS | [INST-OF | 'Being] | | | | | | | | | | | |
| THEME | [INST-OF | 'Thing] | | | | | | | | | | | |

When the type for 'Have1 is combined with a THEME that is required to be an instance of 'Name and a POSS which is a human being we have a relational individual that actually fits the type 'Be-called, whose description was given in (36), repeated here. But as we have fixed OBJ25 as the basis, we pick the equivalent, attached relation NAME as appropriate domain concept.

(36)	[			
	ID	'Be-called		
	<u>ISA</u>	'Have1		
	INST:	POSS	[INST-OF 'Human-being NAME <INST: THEME>]	
		THEME	[INST-OF 'Name]	
	]			

Let us then look at (83), repeated here for convenience. It is a plain Wh-clause with the subject *hans namn*.

(83) Vilket är hans namn? *What is his name?*

The referent of this subject is interpreted as an instance of a name, which has a special, "genitive", relation to the referent of *hans*, which, in the context we are working with, is OBJ25. What this relation could be is given in the description for the type associated with the head noun, in this case NAME-OF. This allows us to build the description (92).

(92)	[INST-OF 'Name		]
	NAME-OF OBJ25		

This description in itself does not allow the interpreter to identify the name. In fact, an identification must take OBJ25 as a basis. Changing perspective, i.e. inverting the relation, we get (21).

(21)	[BASIS OBJ25		]
	DCON '<NAME>		

It is possible to make the referent of a genitive NP a basis for an assertion, as in (93) and if the interpreter then does not know the referent it will have to set one up just as for an indefinite NP. But very often the referent of the genitive modifier is the indicated basis with the domain concept provided by the head noun, as in (94).

(93) Hans namn är för långt. *His name is too long.*
 (94) Hans namn är Erik. *His name is Erik.*

This is the case also for (83), where the Wh-phrase also makes it plain that the name is not to be taken as a basis. Thus, also (83) is assigned the same I-structure as (25) in

the given context.

Whenever an NP is encountered the interpreter has the task to decide how it relates to the information structure. There are three alternatives: (i) the NP refers to a theme, or in any case an element of the basis; (ii) the NP refers to a specification, or to a part of the specification; (iii) the NP expresses a domain, which is, or is being made a topical domain. In the last case the head noun of the NP is likely to express a type with a strong link to an attribute that is common for the implicated basis. This is exactly the case at hand.

Similar to (83) is the Free interrogative NP (84) although here the interpretation is not aided by the presence of a Wh-word. But the information contained in the node-description of the NP is sufficient to identify a basis and a domain concept as just explained. As the interrogative tone is sufficient to suggest a question interpretation, we arrive at the same I-structure, also for this case.

(84) Hans namn?

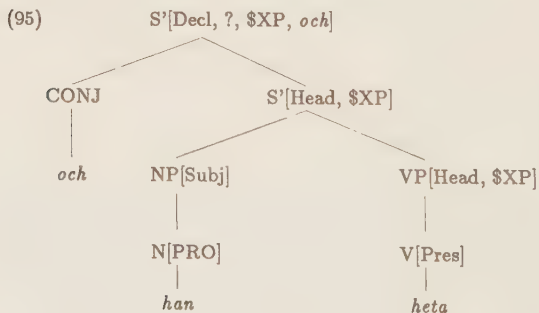
His name?

(85) (Och) han heter?

(And) he is called?

The cut clause (85), finally, also has the same I-structure, but a slightly different derivation. Very likely, the referent of *han* is not only given as a theme, but as a part of the basis for a closed topic. In that case Connection rule III(b) applies. Alternatively, *han* provides an alternative basis, if the closed topic concerned the name of somebody else, in which case rule III(a) applies.

The U-structure for (85) is (95).



The interpretation of (85) as an x-question is associated with the descriptor [SLASH NP]. Just as any other gapped constituent this one must be given an interpretation. However, the interpretation is not constrained by the presence of an extracted constituent, but entirely dependent on the properties of the verb and/or

domain concepts which can be transferred from a contextually given topical domain. In the case at hand the subcategorization properties of *heta* tell us that there is only one possible interpretation for the missing complement, i.e. as a predicative associated with the THEME argument of 'Be-called.

Next consider subordinate clauses corresponding to the main clauses we have considered so far:

- (96) Hon frågade om han hette Erik.

She asked if he's called Erik.

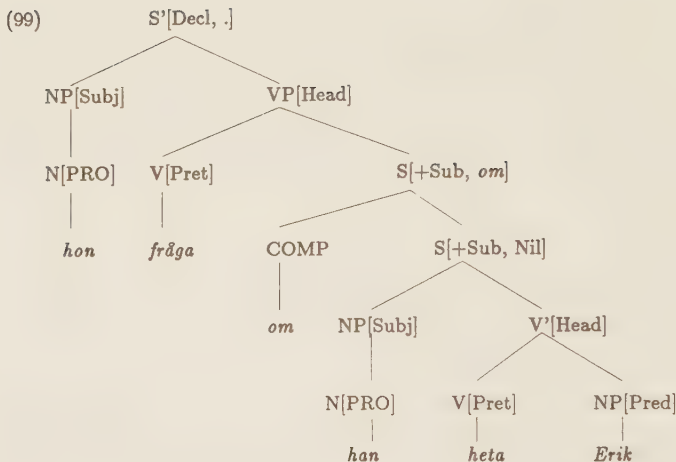
- (97) Hon frågade om han hette Erik eller Sven.

She asked whether he's called Erik or Sven.

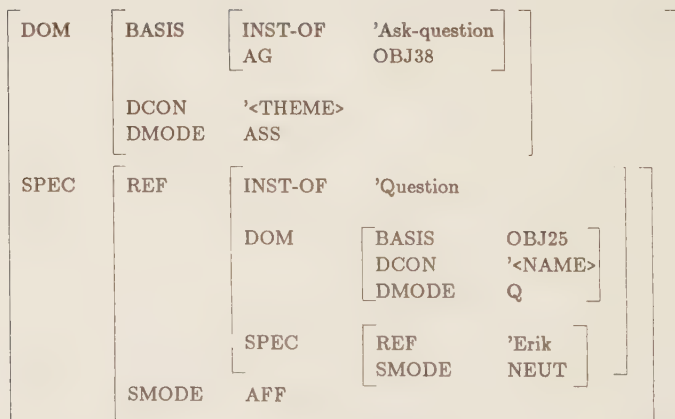
- (98) Hon frågade vad han hette.

She asked what he's called.

These utterances must all be construed as assertions. In these assertions a question is reported and the information structure of that question is evident in all three cases. A possible I-structure of (96) is (100), where the topical domain of the assertion is assumed to be "What did he ask about", and the modal values stem from the clause-type, which, just as for main clauses, is registered in the U-structure. The U-structure of (96) is (99).



(100)



A more complicated case arises when the subordinate Wh-clause is part of an interrogative clause, as in the following example.

(101) Kommer du ihåg vad han hette? Do you remember what he is called?

Such utterances can always be interpreted as nexus-questions, but they also frequently have the effect of raising the subordinate question. It may be answered by a simple specification, such as *Erik*, with an obvious meaning. Moreover, it can be reported by means of a sentence such as *She asked me what he's called*.

It should be remembered that the same thing happens when we use an interrogative NP as complement in those environments:

(102) Kommer du ihåg hans namn? *Do you remember his name?*

I analyze such utterances as potentially topicalizing two domains and thus having two possible I-structures. Thus in a sense they are ambiguous, but the ambiguity resides in information structure, which means that the two interpretations are compatible. When the subordinate domain is topicalized, as it would probably be in a situation where the referent of *han* is thematic, the matrix clause is interpreted as a condition, which must be satisfied for the question to be answerable by the addressee. The speaker gives recognition to the possibility that the addressee might not be able to answer the question. Under that interpretation, (101) and (102) are equivalent to (103).

(103) Vad hette han (om du kommer ihåg)?
 What is he called (if you remember)?

It would be possible to represent such conditions as part of the basis, or as part of the entire I-structure. The simplest solution to the representation problem is just to register both of the possible I-structures together. The addressee may attend to whichever of them he finds appropriate. If he answers the second one, this action in itself answers the first. If he denies having information on the second domain by negating the nexus-question, he causes the second domain to be detopicalized in just the same way as he would do if he volunteered the information *I don't remember*, or *I don't know*.

The topical domain of the first interpretation is derived in accordance with Connection rule II(c). The topical domain of the second interpretation is derived by rule II(a), but with the referent of *han* instead of *du*, as theme. The two possible I-structures are the following:

(104a)	DOM	BASIS	ISA EXP THEME 'Relation-of-memory OBJ2 INST-OF POSS 'Be-called OBJ25
	SPEC	DCON DMODE REF SMODE	'<INST-OF> Q 'Remember NEUT
(104b) =(36)			
	DOM	BASIS DCON DMODE	OBJ25 '<NAME> Q
	SPEC	[SMODE	IGN]

In (104a) the second argument of the highest relation is merely described by type and by experiencer argument. I do not type this argument as a question as what is remembered is not the question *What is he called?*, but the specified relational individual. The subordinate clause is thus given a different interpretation here than in the previous example. For further discussion, see chapter 6.2.

A subordinate clause may be sluiced, as in (105), which may be part of a discussion on the baptism of a newborn girl.

- (105) Något av de namnen skall hon få, men vi har ännu inte bestämt vilket.
She will be given one of those names, but we have not yet decided which one.

A sluiced Wh-clause requires a basis in which it can fit. Some (e.g. Levin, 1982) would say that it requires a preceding sentence, but it may also be argued that what is required is a current (closed or open) topic from which the basis can be obtained, and topics are not necessarily introduced by sentences in the strict sense. Moreover, sluicing is possible across utterances. (106) illustrates both properties.

- (106) A: Har dom telefon därute?
 B: Ja, men jag kommer inte ihåg vilket nummer.
 A: *Have they got a phone out there?*
 B: *Yes, but I don't remember the number.*

The basis of a sluiced Wh-clause can not be expressed in a matrix clause to the sluiced

clause. It must be given in a previous utterance or information unit. In (105) the basis for the sluiced Wh-clause *vilket* is created in a clause which is coordinated with the matrix clause of the sluiced clause.

The question is then at what point new topics, and new information, are registered in the context structure. My assumption is that it is registered there as quickly as possible and that the relevant information can be obtained from there as soon as a new clause, or a new piece of information, is provided. Thus, the rules for connecting with a closed or open topic should be applicable for sluiced clauses.

Of the different interrogative structures there is one left to consider, the Infinitive Wh-clauses, of which (107) is one example. Although (107) would not be frequent in Swedish conversations it is not ungrammatical and is just as its more frequent fellows, (108)-(110), a kind of deliberative question.

(107) Vad heta?	<i>What to be called?</i>
(108) Vad göra?	<i>What to do?</i>
(109) Var träffas?	<i>Where to meet?</i>
(110) Hur få ekonomin att gå ihop?	<i>How to make ends meet?</i>

As such it has an understood subject, which is likely to be the speaker or, in any case, a thematic referent. A difference with deliberative questions from the questions we have considered so far is that they do not pertain to the real world. As the basis is part of a plan, i.e. part of a non-real sub-universe, the answer has to be made up or decided upon. In the I-structure for (107) this information is entered in the description of the domain.

(111)	DOM	<table><tr><td>IND-OF</td><td>[PLANS-OF OBJ1]</td></tr><tr><td>BASIS</td><td>OBJ1</td></tr><tr><td>DCON</td><td>'<NAME></td></tr><tr><td>DMODE</td><td>Q</td></tr></table>	IND-OF	[PLANS-OF OBJ1]	BASIS	OBJ1	DCON	'<NAME>	DMODE	Q
IND-OF	[PLANS-OF OBJ1]									
BASIS	OBJ1									
DCON	'<NAME>									
DMODE	Q									
	SPEC	[SMODE IGN]								

In this section the utterances for which I-structures were derived only involved a singular relational token. In the rest of this chapter I will consider some examples of utterances that involve more than one relation, in particular utterances in which reference is made to sets of individuals or where quantifiers are used.

5.3.4 *Sets as bases.* A slight complication arises when we inquire about sets instead of single individuals. Consider a question such as (112):

- (112) Vad heter dina barn? *What are your children called?*

Here the noun phrase *dina barn* should enable the addressee to identify a particular set of individuals, the typical member of which is a child of the addressee. The topical domain of this question can be rendered as in (113), where <MEMB NAME> evaluates to a pair of names, since the given set has two members.

(113)	BASIS	[	ID	SET22	]	
			MEMB:	INST-OF		'Child
				POSS		OBJ2
			MEMB	(OBJ 5		OBJ15)
	DCON	'<MEMB NAME>				
	DMODE	Q				

5.3.5 *Relational questions.* Engdahl (1980, 1986) has drawn attention to the existence of a class of questions that allow answers that do not directly refer to individuals, but only indirectly do so via a relation to one or more of the expressions of the question. The following are some examples.⁷

- (114) Who does every Englishman admire most?
 (115) Who do you expect every Englishman to admire most?
 (116) Vad vågade ingen fråga någon om?
What did nobody dare to ask anyone about?
 (117) Vilken av sina böcker brukar varje författare rekommendera?
Which of his books does every author usually recommend?

Question (114) may of course be answered by a reference to an individual, such as *David Livingstone* or *Yourself, Sir*, but it can also be answered by a specifying expression such as *his mother*, which for every Englishman picks out a particular individual. Similarly, (116) may be answered by specifying an individual such as *yesterday's murder* or an individual which is related to one or both of the generalizing NPs, such as *the anonymous letter he had received*, which is two-way ambiguous, or *the letter he had received from his wife*, which is four-way ambiguous, the pronouns possibly referring to different antecedents.

⁷ - - - -

(116) is taken from Schiebe (1982), (117) from Engdahl (1980).

We could here say that the initial Wh-phrase may be interpreted as either referentially dependent or referentially independent of the quantified NP or NPs appearing internally in the clause. (114) would thus show the same kind of ambiguity as the corresponding assertion (13).

(13) Every Englishman admires a woman.

As Engdahl points out, however, this ambiguity seems hard to treat as an ordinary scope ambiguity, since (115) can also receive relational answers. And if the NP *every Englishman* (or rather the universal quantifier it is associated with) is given scope over the initial *who* (i.e. the existential quantifier that this phrase is associated with) it seems that it must take scope over the whole sentence including *expect*. But it is not necessary in (115) that the expectations are concerned with any given set of Englishmen, they should rather be taken as relating to Englishmen as perceived by the addressee.

Moreover, relational questions seem to involve a particularly strong form of relational dependence. It is not only the case that (114) asks for a specification of some individual that can be uniquely determined given an Englishman and the fact that he admires a person; instead the question seems to take for granted that there is an independent and uniform way to identify the admired person across all Englishman. Thus, it does not seem correct to answer (114) by providing a list of facts of the form "John Smith admires Mary Smith", "Bill Rogers admires his aunt", and so on, even in the unlikely event that such a list could be produced. With other sentences of similar format such interpretations are possible, especially if the generalizing NP is known to range over a finite set, as in (118), but we can nevertheless distinguish the two interpretations as so many instances of relational questions seem to favour the relational interpretation. Conversely, by using a multiple Wh-clause, as in (119), the list interpretation may be made the only possible one.

(118) What did each guest order?

(119) What did which guest order?

The sentence (117) is a case where a relational answer seems to be the only possible one, since there is no book, at least in our world, which is such that it can be attributed to every author as his book. Possible answers to (117) are specifying expressions such as *his latest book* or *the one which the critics praised most*.

Engdahl has worked out two different accounts of relational questions, one in Engdahl (1980) and another in Engdahl (1986). The first one I will leave aside as it is rejected in the later work and clearly is deficient (see Schiebe (1982) for relevant arguments). The second account analyses relational questions in terms of functions from individuals to individuals. The idea is that what a relational question asks for, and what a relational answer provides, is some such function. For instance, the answer *his mother* to (114) is analysed as specifying the function which to every Englishman, *x*, assigns

x's mother, and the answer *the one that the critics praised most* to (117) as specifying the function which to every author, y, assigns that one of y's books which the critics praised most.

In her representations of the relational interpretations of these questions, which are stated in the intensional logic of Montague (1974), Engdahl uses variables over such functions. The relevant interpretation of (114) can be paraphrased as follows:

- (120) For which W, where for all x, W(x) is a person; every Englishman, y, admires W(y)?

In case there are two quantified NP in the question, as in (116), a variable over functions with two arguments is used, and so on. In the case of individual interpretations she uses a special variable W^O ranging over individuals.

In spite of Engdahl's demonstration that such a conception of relational questions can be made part of an integrated description of a large class of syntactically and semantically complex structures, there is something unintuitive about it. Somewhat naively we may say that a *who*-question does not ask for a function, but for a person. You cannot answer (114) by simply saying *mother*, or worse, *the mother-function*; you have to use a possessive determiner and say *his mother*. We should also note that a relational answer is possible even if the question obviously asks for an individual, as in (121). Thus, a relational answer does not require that the question itself is relational.

- (121) Who does John admire?

This raises the matter if (114) is a case of a real ambiguity. It is not necessary that a question is ambiguous just because it is possible to answer it in two distinguishable ways. This is necessary only in a theory such as Engdahl's, which actually equates questions with sets of propositions that express true answers to it. Similarly, an utterance of (122) may be interpreted in two ways. The noun phrase *his mother* may refer to the mother of a contextually given male person and thus refer independently of the generalizing NP *every Englishman*, or it may refer to the mother of any Englishman we choose to apply the utterance to. But this fact does not necessarily make the relative clause ambiguous, nor even the subject NP.

- (122) The only person who every Englishman admires is his mother.

But suppose we regard (114) as ambiguous. Another question is then where to locate the ambiguity. Engdahl locates it in the meaning of Wh-words. In her account every Wh-phrase is associated with an interrogative quantifier which involves existential quantification over a variable over relational functions. But since the relational functions can have any number of arguments places — roughly, one argument place for each NP in the sentence — we find that each Wh-phrase becomes in principle n-ways ambiguous. Apparently the same ambiguity must be attributed to indefinite

phrases such as *some* and *someone*. Of course there would not be many occasions on which we would have to invoke the variables ranging over functions with three (or more) arguments, but the principle nevertheless seems wrong. At most we have a two-way ambiguity in the interpretation of these phrases as referentially independent or referentially dependent and it is doubtful that this ambiguity in interpretation should be attributed to the meaning of the individual Wh-words. For more elaborated arguments along these lines the reader is referred to Schiebe (1982).

The question is then whether there is an alternative, more intuitive way of analysing relational questions. I think this is possible if we regard relational questions as relating to typical instances (or typical members, respectively). When a generalizing NP appears in the subject position, which is commonly the case, the basis of the relational question may furthermore be analysed as one of the properties of the typical instance of the type associated with the subject NP.

The difference between (121) and (114) could then be described as follows. (121) relates to a token state in which the individual John admires something. The object of John's admiration is therefore by necessity a token and the question (121) asks for a specification of that token. (114) on the other hand relates to a typical fact about Englishmen, which has the form 'Englishman - admires - person'. The topical domains of the two cases are given in (123) and (124), respectively.

(123)	BASIS	<table> <tr> <td>ID</td> <td>REL70</td> <td></td> <td></td> </tr> <tr> <td>INST-OF</td> <td>'Admire</td> <td></td> <td></td> </tr> <tr> <td>EXP</td> <td>OBJ36</td> <td></td> <td></td> </tr> </table>			ID	REL70			INST-OF	'Admire			EXP	OBJ36		
ID	REL70															
INST-OF	'Admire															
EXP	OBJ36															
	DCON	'<THEME>	[INST-OF	'Person]												
	D/I	DEF														

(124)	BASIS	<table> <tr> <td>INST-OF</td> <td>'Admire</td> <td></td> </tr> <tr> <td>REL-OF</td> <td><'Englishman INST:></td> <td></td> </tr> <tr> <td>EXP</td> <td>?2<Inst:></td> <td></td> </tr> </table>			INST-OF	'Admire		REL-OF	<'Englishman INST:>		EXP	?2<Inst:>	
INST-OF	'Admire												
REL-OF	<'Englishman INST:>												
EXP	?2<Inst:>												
	DCON	'<THEME>	[INST-OF	'Person]									
	D/I	DEF											

In both of these I-structures I have registered the domains as definite. To see why, note first that the two analyses only differ in their bases, not in their domain concepts. The information that *who* provides for the domain concept is thus considered to be the same in both cases. This also means that the domain concept is the same for both the relational and the individual interpretation of (114). If we leave it at that we give (114) a single I-structure, which however may be specified by either a relational

answer or an individual answer. An individual answer such as *David Livingstone* is then assigned the I-structure (125) and a relational answer such as *his mother* an I-structure of the form (126).⁸

(125)	SPEC	<table><tr><td>SMODE</td><td>AFF</td><td></td></tr><tr><td>REF</td><td><table><tr><td>ID</td><td>OBJ88</td></tr><tr><td>NAME</td><td>'David L.</td></tr></table></td></tr></table>	SMODE	AFF		REF	<table><tr><td>ID</td><td>OBJ88</td></tr><tr><td>NAME</td><td>'David L.</td></tr></table>	ID	OBJ88	NAME	'David L.
SMODE	AFF										
REF	<table><tr><td>ID</td><td>OBJ88</td></tr><tr><td>NAME</td><td>'David L.</td></tr></table>	ID	OBJ88	NAME	'David L.						
ID	OBJ88										
NAME	'David L.										
(126)	SPEC	<table><tr><td>SMODE</td><td>AFF</td><td></td></tr><tr><td>REF</td><td><table><tr><td>INST-OF</td><td>'Mother</td></tr><tr><td>POSS</td><td>?1<Inst:></td></tr></table></td></tr></table>	SMODE	AFF		REF	<table><tr><td>INST-OF</td><td>'Mother</td></tr><tr><td>POSS</td><td>?1<Inst:></td></tr></table>	INST-OF	'Mother	POSS	?1<Inst:>
SMODE	AFF										
REF	<table><tr><td>INST-OF</td><td>'Mother</td></tr><tr><td>POSS</td><td>?1<Inst:></td></tr></table>	INST-OF	'Mother	POSS	?1<Inst:>						
INST-OF	'Mother										
POSS	?1<Inst:>										

Both of these specifications can be said to be definite. For the first case this is quite obvious. In the second case the description that the answer provides has a unique and uniform instantiation for every instantiation of the variable. A description that does not determine the instantiation uniquely, such as the definite description *The woman*, cannot be accepted as an answer to (114). In fact, the only(?) way of making the instantiation unique appears to make it dependent on the instantiation of one or more of the ?n<Inst:>-variables.

However, if these two conditions on definiteness should be considered different, we could very well make a distinction in the I-structure for a relational question as opposed to an individual question. But we need not invoke it as a difference in domain concept. Instead the value of D/I could be different in the two cases, one value, say DEF, indicating ordinary definiteness and another, say RDEF, indicating relative definiteness. This means that the difference between the two interpretations is seen as a difference in the kind of answer that is expected.

For the analysis of (116) we must assume a context in which the noun phrases *ingen* (no one) and *nāgon* (anyone) range over some contextually given set of people, say a set of people that have assembled at a party or a conference. The topical domain of (116) can be rendered as in (127) and an answer such as *the letter his mistress had received from his wife* (in one interpretation) as in (128).

⁸ A problem that I will not consider is the conditions under which it is possible for a pronoun such as *his* to pick out a typical instance of a type. For discussion, see Dahl (1983), Engdahl (1986), Schiebe (1982, 1983, 1985).

(127)	BASIS	INST-OF	'Dare					
		POL	NEG					
		REL-OF	<SET58 MEMB:>					
		AG	?1<Memb:>					
		ACT	<table> <tr> <td>INST-OF</td> <td>'Ask-about</td> </tr> <tr> <td>AG</td> <td>?1<Memb:></td> </tr> <tr> <td>PAT</td> <td>?3<SET58 Memb></td> </tr> </table>	INST-OF	'Ask-about	AG	?1<Memb:>	PAT
	INST-OF	'Ask-about						
	AG	?1<Memb:>						
	PAT	?3<SET58 Memb>						
	DCON	'<ACT THEME>						
	D/I	RDEF						

(128)	INST-OF	'Letter					
	AG	<table> <tr> <td>INST-OF</td> <td>'Mistress</td> </tr> <tr> <td>POSS</td> <td>?1<Memb:></td> </tr> </table>	INST-OF	'Mistress	POSS	?1<Memb:>	
INST-OF	'Mistress						
POSS	?1<Memb:>						
	PAT	<table> <tr> <td>INST-Of</td> <td>'Wife</td> </tr> <tr> <td>POSS</td> <td>?3<SET58 Memb></td> </tr> </table>	INST-Of	'Wife	POSS	?3<SET58 Memb>	
INST-Of	'Wife						
POSS	?3<SET58 Memb>						

Again, the question of how the variables in the I-structure of the answer get bound is left open.

Schiebe (1982, 1983, 1985) has proposed to analyse relational questions by means of variables over "denotation potentials", or DPs for short. In Schiebe's system, called DP-logic, an expression such as *his mother* does not only have a denotation potential (induced by the possible referents of *his*), but can also stand for it. The DP is formally defined as a function from possible value assignments to denotations, in very much the same way as an intension is defined as a function from possible worlds to extensions in Intensional logic. For any expression α in the language there is a corresponding expression $\ulcorner \alpha \urcorner$ which denotes the DP of α . If the type of α is a , the type of $\ulcorner \alpha \urcorner$ is $\langle v, a \rangle$. Conversely, if β is an expression of type $\langle v, a \rangle$, then $\llcorner \beta \lrcorner$ is an expression of type a . The symbols $\ulcorner \dots \urcorner$, and $\llcorner \dots \lrcorner$, are referred to as the "sealing marks" and "unsealing marks", respectively and behave as the intensional and extensional operators of Montague (1974). In particular, the following equivalence holds:

$$(E) \quad \llcorner \ulcorner \alpha \urcorner \lrcorner = \alpha$$

The interpretation of a question such as (114) will then have the following rough format, where z is a variable of type $\langle v, e \rangle$ and x is a variable of type e .

- (129) For which z , ($\bigcup_z \bigcup$ a person for x an Englishman); every Englishman, x ,
admires $\bigcup_z \bigcup$ most.

An answer such as *his mother* is simply rendered as

- (130) $\bigcap x$'s mother $\bigcap$

In fact, as (129) should be read as an abstract over the variable z , so the answer (130) is equivalent to (131):

- (131) λz (Every Englishman, x , admires $\bigcup_z \bigcup$ most) ($\bigcap x$'s mother $\bigcap$)

This expression then reduces to (132), because the argument is of the appropriate type for the variable and the unsealing marks undo the effect of the sealing marks in accordance with equivalence (E). In fact, the purpose of the sealing marks is to guarantee equivalence between pairs of expressions such as (131) and (132).

- (132) Every Englishman, x , admires x 's mother most.

Before discussing this analysis it is necessary to look at the motivations behind Schiebe's DP-logic. It has been developed in order to support and make formally precise the thesis that "referring expressions of natural languages may be conceived of in a uniform manner in all their normal uses including those in which they are said to correspond to variables, namely, as means of expression which a speaker actually uses to refer to something he wants to speak of" (Schiebe, 1983: 146). The question is then what a referring expression, such as *his* of (122), refers to; it is obviously not an ordinary individual. Schiebe's answer is that such a referring expression refers to a model individual, an entity "created by imagination in connection with a concrete speech event which may be said to introduce it" (ibid., p. 146). Model individuals also correspond to sets of ordinary individuals so that they can be viewed "as a kind of semantic auxiliary devices which make it possible to think of and speak of things such as a set under a certain description in the way that this is usually done in natural language communication" (ibid., p. 147).

DPs are related to model individuals as a means of capturing their relation to the set of individuals which they are models of. Although model individuals do not enter directly into the versions of DP-logic of Schiebe (1983), he envisages versions in which they are, where each variable will be associated with a model individual, which in turn is associated with a DP.

The typical instance of a type and the typical member of a set that are employed in my interpretation procedure obviously have a lot in common with Schiebe's model individuals. In particular, I take it that pronouns can refer to such entities and have introduced them directly as entities of the universe of discourse, although always being

attached to a type or a set and in that respect "sealed off" from the world. My scheme is hence more direct than Schiebe's, as it takes model individuals and ordinary individuals to be of the same semantic type. In spite of the relation between DPs and model individuals, the paraphrase (129) strikes me as too abstract, as it only indirectly characterizes the question as being about persons.

The conclusion of this section as regards relational questions is that they differ from individual questions in at most two respects. First and most important, they pertain to properties of typical individuals rather than to properties of ordinary individuals. The properties themselves can be structured into a basis and a domain concept in the same way in both cases, however. Secondly, they are associated with a condition of definiteness on the answer, which requires the specifying expression to determine a unique referent for each given set of ordinary individuals that corresponds to a type introduced in the question.

5.3.6 Multiple questions. Although not usually classified as a multiple question, the following utterance definitely introduces two questions, or at least, two different domain concepts.

(133) Var och när ska vi träffas? *Where and when shall we meet?*

The two domain concepts relate to the same basis, however, an event where the members of the set referred to by *we* will meet. The topical domain can be represented as in (134), where REL76 is the identifier for that event.

(134)
$$\left[\begin{array}{cc} \text{BASIS} & \text{REL76} \\ \text{DCON} & \left[\begin{array}{cc} 1 & \text{'<PLACE>'} \\ 2 & \text{'<TIME>'} \end{array} \right] \end{array} \right]$$

As was noted in 4.3.3.1 the interpretation of questions with coordinated Wh-phrases in the foundation is complicated. Consider the following sentences:

(135) Vem ska vi träffa? *Who are we to meet?*
 (136) *Var ska vi träffa? *Where are we to meet?*
 (137) *Vem och var ska vi träffa? *Who and where are we to meet?*
 (138) Vem ska vi träffa, och var? *Who are we to meet, and where?*

(137) is clearly illformed. The reason for this seems to be that the initial *vem* (who) cannot be taken as an established argument at the time when *var* (where) is to be interpreted. Thus, (137) seems to be incomplete in the same way as (136) is incomplete. With (138), on the other hand, a topical domain is introduced by the first clause, which can be taken as a reference point for the interpretation of *var* in

accordance with rule IV(c) of connecting with an open domain. Note that (138) seems not to be a case of ordinary sluicing; (139) is not at all as good as (138).

(139) ?Vem ska vi träffa, och kommer ni ihåg var?

Who are we to meet, and do you remember where?

It is then a problem to design the interpretation procedure so that (138) is not assigned an interpretation on the form of (134). I think this must be done with special reference to the fact that we have a coordinated Wh-foundation; (140), where an "incomplete" Wh-clause is embedded in another Wh-clause, that provides the missing obligatory constituent, is well-formed.

(140) Vem var det ingen kunde komma ihåg var vi skulle träffa?

Who was it no one could remember where we were to meet?

As I have no solution to offer, I will have to leave the problem of the interpretation of coordinated Wh-phrases unsolved.

A multiple Wh-clause can be used to convey a multiple question in different types of contexts. Just as a question with a coordinated Wh-foundation it may relate to a single event which is to be specified in several different respects. For instance, (141) may be asked in a quiz show while at the same time a picture or film is shown depicting the event. (142) may be asked in a context where someone is telling someone else about a telephone conversation and the listener wants to know a bit more about the circumstances of the conversation.

(141) Vilken löpare från vilket land ser vi här vinna 1500-metersfinalen i vilket OS?

Which athlete from which country is here seen winning the 1500-meters event in which Olympic games?

(142) Vem ringde till vem?

Who phoned whom?

The I-structure of (142) is as in (143). In the context of (142) it can be assumed that there was an event of calling up and this event is taken as the basis. Moreover, it is known that the caller and the callee are members of a contextually salient set of people.

(143)	DOM	BASIS	[ID REL30 INST-OF 'Call-up]	
			[1 '<AG> [MEMB-OF SET35] 2 '<PAT> [MEMB-OF SET35]]	

The analysis of (141) is similar, the difference being that the domain concepts are constrained as to the type of their instances instead of membership of a given set.

A second type of multiple question typically conveyed by a multiple Wh-clause is the distributional question, where members of a known set (or instances of known types) are understood as being distributed onto the members of a different set. Suppose, for instance that two people are to inform a group of people about something and decide to do so over the phone. Then the question (144) is likely to be asked. (145) is a possible answer.

(144) Vem ringer till vem? *Who'll phone whom?*

(145) Om du ringer till Eva och Anna så ringer jag till dom andra.
If you'll phone to Eva and Anna, I'll phone the others.

I take the basis of (144) to be the set of actions to be performed, one action for each of the people that should be informed. The typical member of this set is an action in which either you or I phone to a member of the set of people to be informed. What is asked for is to have each action fully specified. Thus, the typical domain of (144) can be rendered as in (146).

(146)	BASIS	[	ID	SET27	]
			IND-OF	[PLANS-OF SET12]	
			MEMB:	[	]
				INST-OF	'Phone
				AG	[MEMB-OF SET12]
				PAT	?1<SET38 Memb:>
	DCON		'<MEMB>		

It should be noted that the Wh-foundation of a multiple Wh-clause has a different status from the internal Wh-phrase, although the interpretation is influenced by the lexical material of the clause and intuitions about what a possible interpretation is seem to vary (see Hirschbühler (1979) for some discussion). Generally speaking, the Wh-foundation is referentially dependent on the internal Wh-phrase, i.e. the relation

between the two sets is a function in the direction from the set associated with the internal Wh-phrase to the set associated with the Wh-foundation, but not necessarily a function in the opposite direction.

This can be seen more clearly if we consider cases with three or more Wh-phrases. (147) can be interpreted in a way which makes it equivalent to (148), but hardly as equivalent to (149).

- (147) Det är inte klarlagt när han sålt vad till vem.
It is not known when he sold what to whom.

- (148) Det är klarlagt vad han har sålt till vem men inte vid vilka tidpunkter de olika försäljningarna ägt rum.
It is known what he has sold to whom, but not at what times the different transactions have occurred.

- (149) Det är klarlagt precis när han sålt vad men inte till vem de olika försäljningarna skedde.
It is known exactly when he sold what, but not to whom the different sales were made.

Furthermore, as is well known, when a subordinate multiple Wh-clause is embedded in a Wh-clause, it is possible for the internal Wh-phrase of the subordinate clause to form a multiple question with the Wh-foundation of the matrix clause. (150) can be answered either by (151) or (152).

- (150) Vem bestämmer vem som får använda vilka bilar?
Who decides who can use which cars?

- (151) Det gör Svensson. *Svensson does.*

- (152) Svensson bestämmer vem som får använda Saabarna och Larsson bestämmer vem som får använda Chevorna.
Svensson decides who can use the Saabs and Larsson decides who can use the Chevrolets.

I would not consider an answer wrong which distributes cars to people, as in (153), rather than people to cars, as in (152), since that answer very likely provides the information asked for. But I would say that (154) in that case would have been a better way of phrasing the question.

- (153) Svensson bestämmer vilka bilar de anställda får använda och Larsson bestämmer vilka bilar cheferna får använda.
Svensson decides which cars can be used by the employees and Larsson decides which cars can be used by the directors.

(154) Vem bestämmer vilka bilar som får användas av vilka anställda?

Who decides which cars can be used by which employees?

I think this property of clause-internal Wh-phrases in multiple Wh-clauses should be related to their interpretation in non-inverted Wh-clauses. The question (155) is equivalent to (156), not (157).

(155) Och han sa att vi skulle träffas var då?

And he said that we were going to meet where?

(156) Var sa han att vi skulle träffas?

Where did he say we are to meet?

(157) Sa han var vi skulle träffas?

Did he say where we are to meet?

Conversely, the fact that a Wh-phrase appears as a foundation of a subordinate clause is a sign that it belongs there, i.e. that its basis should be taken from that subordinate clause only (cf. Engdahl 1986: 82 for a different statement of the same fact).

In the first interpretation of (150), appropriate for the answer (151), it is relating to a single fact involving a type of decision. It can thus be analyzed in the same way as other simple questions. For the second interpretation we must first assume an appropriate division of cars, which we can think of as a set whose members are sets of physical cars. Call this set SET10. For each member of that set there is a decision, namely the decision who can drive those cars. This gives us a set of decisions, which can be called SET20. For each of the decisions there is someone that makes it. This gives us finally a set of facts each of the form "person_i - makes - decision_i", where decision_i ranges over the members of SET20. Call this set SET30. SET30 constitutes the basis of the question and the domain concept is <MEMB> just as in (146) above. The topical domain is shown in (158).

(158)	BASIS	[			
		ID	SET30		
		MEMB:	INST-OF	'Decide	
			AG	[INST-OF 'Person]	
			THEME	?1<SET20 Memb>	
DCON	'<MEMB>				

Finally, it must be noted that there are contexts where the individuals that should be distributed are not given as members of sets, but only as instances of types. The

following rather complicated, but authentic, text provides an illustration.

- (159) Förr visste alla allt om alla, det var tryggt. Nu vet man inte vem som vet vad om vem.

In the past everyone knew everything about everyone, that felt secure.

Nowadays no one knows who knows what about whom.

In this case the subordinate multiple Wh-clause does not, on my analysis, express a question, but merely gives an ignorative presentation of a set of facts of a certain kind (cf. chapter 6). The analysis of its interpretation can be related to the present analysis of multiple questions in the following way, however. Whereas a multiple question such as *Who knows what about whom?* can be analysed as asking for a list of (types of) facts of the form "Person - knows - (fact-about-person)" the claim made in the last clause of (159) is that no person has access to that list, i.e. that no person knows the individual members of that type of facts.

6. The Polysemy of Interrogative Features.

Up till now the interrogative structures have primarily been described as question vehicles. In this chapter I will look at the use of the most important structural interrogative features, in questions as well as in other illocutions, with the aim of determining their range of interpretation and the co-textual and situational factors that affect it. In particular, I am interested in any generalizations that can be made regarding their different uses, and in seeing which uses must be treated as functionally different.

In 6.2 I look at Wh-words and Wh-clauses. In 6.3 the difference between subordinate interrogative clauses, *om*-clauses, and subordinate, declarative clauses, *att*-clauses, is considered, and in 6.4 main interrogative and declarative clauses. Before I consider the individual features, I summarize the basic assumptions of my model of description.

6.1 Introduction.

6.1.1 *Systems of Contrasting Features.* When the function of a linguistic feature is considered it is important to look at its nearest contrasts. Without something to contrast it with, if only its absence, the feature would make no difference at all and thus be meaningless.

In the grammar an attribute together with its values define a system in the sense of systemic grammar (cf. 4.1.1). For instance, the attribute SFORM defines a system of clause-types: Interrogative, Declarative, Imperative, Wh-Ignorative, Wh-Exclamative and so on. Similarly, the attributes COMP and TONE define systems of contrasting options. These systems have been given in 4.4.1 but are reproduced here:

SFORM	{ Decl, Int, Imp, WhI, WhE, WhR, WhF, Excl, Disl }
TONE	{ ., ?, !, !?, , }
COMP	{ <i>att</i> , <i>om</i> , <i>som</i> , <i>vad</i> , <i>att'</i> , Nil }

At word and phrase level we find contrasts pertaining to quantification and determination, such as the following:

Ignorative	<i>vilken (-et, -a)</i>	which
Deictic	<i>den (det, de); -en (-et, -na)</i>	the
Existential	<i>någon (-ot, -ra); en (ett)</i>	some; a(n)
Negative	<i>ingen (-et, -a)</i>	no
Universal	<i>alla; varje</i>	all, every

Table 6: *A System of Swedish Determiners.*

Ignorative	<i>var</i>	where
Deictic	<i>där, här</i>	there, here
Existential	<i>någonstans</i>	somewhere
Negative	<i>ingenstans</i>	nowhere
Universal	<i>överallt</i>	everywhere

Table 7: *A System of Swedish Locative Adverbs.*

The Ignorative form is different from the others in its inability to be specifying. Of the sentences in (1) and (2), (1a) and (2a) may be questions if pronounced with an interrogative intonation, but can not be interpreted as assertions. Therefore, I take the ignorative to be an option that should be contrasted with all the others. In the grammar this is done by means of the attribute WH. It occurs with all Wh-phrases but with no other type of phrase.

- | | |
|-----------------------------|-----------------------------|
| (1)a. *Han tar vilken buss. | <i>*He takes which bus.</i> |
| b. Han tar bussen. | <i>He takes the bus.</i> |
| c. Han tar en buss. | <i>He takes a bus.</i> |
| d. Han tar ingen buss. | <i>He takes no bus.</i> |
| e. Han tar varje buss. | <i>He takes every bus.</i> |
| | |
| (2)a. *Hon är var. | <i>*She is where.</i> |
| b. Hon är där. | <i>She is there.</i> |
| c. Hon är någonstans. | <i>She is somewhere.</i> |
| d. Hon är ingenstans. | <i>She is nowhere.</i> |
| e. Hon är överallt. | <i>She is everywhere.</i> |

The ignorative forms are not restricted to questions, however. The subordinate clauses of (3a-b) do not express questions and therefore the term interrogative is not appropriate.

- (3a) Jag bryr mig inte om vilken buss han tar.
I don't care which bus he is taking.

- (3b) Jag har ingen aning om var hon är.
I haven't got the faintest idea where she is.

However, the ignorative can not be defined on the sole basis of morphological criteria. Wh-words in Swedish occur also in exclamative, relative and, what may be termed, general phrases, as illustrated below:

- | | |
|---------------------------------------|---------------------------------------|
| (4) Vilken buss det kommer där! | <i>What a bus that is over there!</i> |
| (5) En buss, vilken han brukar ta. | <i>A bus, which he usually takes.</i> |
| (6) Han kan ta vilken buss som helst. | <i>He can take any bus.</i> |

There are obvious differences in function between *vilken* in (3a) and (4)-(6), but there are also similarities. Whether these similarities are sufficiently large to warrant description under a single category such as 'ignorative', will be looked into in section 6.2.

6.1.2 On Explanations of Polysemy. This chapter is about the polysemy of interrogative features, by which I mean their potential of giving rise to clearly separable interpretations of the utterances of which they are part. It is very difficult to say exactly what contribution to an interpretation a specific word, or structural feature, makes, but the only way of finding out is the commutation test, i.e. to see what happens if we exchange it with units that can contrast with it (cf. Sonesson, 1978). This exchange may yield different results in different environments and if one result can't be predicted from the other (given our knowledge of the new environment) it must be concluded that we are confronted with a different use. Sometimes predictability can not ensure sameness of use; if the use is frequent and the predicted interpretation non-obvious (in a sense which needs to be clarified) we might postulate a different use.

Polysemy may be deliberately created, as in metaphor, which presupposes a well-defined, established, relatively concrete meaning. Certain uses of grammatical constructions, such as rhetorical questions may also be seen as deliberate tropes, but I believe that polysemy of structural features is usually non-deliberate, arising from a non-necessary association between the structural feature and an aspect of interpretation. The process may be described as follows:

1. The structural feature F has an established use either, (a), as an indication of a content feature C or, (b), as a feature which is required for reasons of grammatical well-formedness.
2. F may be used in conjunction with a set of expressions, E, which either by themselves, or in environments where they co-occur with F, give rise to the content feature C', distinct from C.

3. The co-occurrence between F and C' gives rise to an association between F and C'.
4. This association grows so strong that F itself is seen as a vehicle of communicating C' and thus can be used even though none of the expressions, E, are present, especially if other features of the utterance support such an interpretation.

I believe that diachronic processes of this kind can explain much of the variation in the interpretation of structural interrogative features. Possible illustrations are given below.

6.2 WH-clauses — or The Ignorative in Swedish.

6.2.1 *Characteristics of the Ignorative Wh-clause.* Most Wh-words can be used in various functions, but they differ in versatility. A few of them, such as *vad*, *vilken* are used in a variety of different functions, whereas others, such as *vart*, *vems* are more restricted in distribution. This is a problem, since part of the definition of a Wh-clause is that it contains a Wh-word somewhere. And if some Wh-words, but not others, can be used in a given context we would like to have a general explanation for it. In some cases it is possible to say that the syntactic function of the Wh-clause is so different from what it is in a question that it deserves a grammatical feature of its own. We can then identify a subset of Wh-words, which enter into co-occurrence restrictions with that feature. This is the purpose of features such as WHMOR of Gazdar et al. (1985) and WHM of the grammar used in this study.

This proliferation of subsets of Wh-words naturally raises the question of why the set of Wh-words should be regarded as a homogenous set at all. The morphological identity is of course striking, although certainly not without exceptions. The syntactic behaviour is also superficially similar with the Wh-phrase normally at the front, corresponding to a gap somewhere in the body of the clause. However, there are also striking syntactic differences between different kinds of Wh-clauses. A case in point are the free relatives that differ considerably from the typical interrogative Wh-clauses. Thus, we have a variety of clause-types and clause-functions that are more or less similar formally.

The starting point in this section is the class of Ignorative Wh-clauses and their use as vehicles of x-questions. I then want to establish the range of ignorative uses and finally contrast them with other uses of Wh-clauses and Wh-words.

A primary characteristic of ignorative Wh-clauses is that any one of the common Wh-words, i.e. those of Table 3 of 4.3.3.1, can be used. Naturally, if we consider complement clauses the nature of the verb may exclude some of the Wh-words, but then we have an explanation for this fact in the presence of a particular lexical item.

Other formal/operational characteristics are the following (cf. Baker, 1970; von Bremen, 1983): (1) the Wh-words can not be replaced by their deictic contrasts; (2) the clause may be clefted; (3) the clause may be sluiced if the context allows it; (4) there may be multiple Wh-phrases; (5) there may be a Wh-Indefinite construction; (6) it is possible to insert a swearing interjection after one-word Wh-phrases, and (7) extraposition of subject Wh-clauses is common when allowed by the predicate.

The characteristic property of an ignorative Wh-clause, as regards interpretation, is that it presupposes the existence of a "correct" specification, which is not expressed, but presented ignoratively. This property may be characterized in terms of three features, (i) *factivity*, which means the correspondence to an assumed correct specification, (ii) *domain structure*, which means the structure imposed on that fact in terms of a basis and domain concept, and (iii) *ignorativity*, which means the adoption of an ignorative perspective, i.e. an ignorative mode of presentation. The last feature is the most important; *att*-clauses may also be factive and many clauses may have domain structure.

When a Wh-clause is used to express a question it also has the property of *topicality*, which means that the indicated domain is put up as a topic for a dialogue or other information activity.

6.2.2 *Clause-types with Wh-words.* Wh-words can be found in the following clause-types and clause-like constructions:

Ignorative clauses.

1. Main Wh-clauses
2. Subordinate Complement Wh-clauses

nu-clauses (*Nescio*-sentences)

Generalizing (Relative) Clauses

- (a) *ān*-clauses
- (b) Constructions with *-helst* and *-som helst*

Exclamative Clauses.

1. Main Exclamative Clauses.
2. Free Subordinated Exclamatives Clauses.
3. Exclamative Complement Clauses.

Relative Clauses.

1. Attributive Relative Clauses
 - (a) Identifying
 - (b) Elaborative

2. Appositive Relative Clauses

- (a) Phrasal
- (b) Clausal

Free Relative Clauses.

Pseudo-cleft Sentences.

6.2.2.1 *Ignorative Wh-clauses.* The primary use of Main ignorative Wh-clauses is as vehicles of direct questions, when they are usually pronounced with an interrogative tone, as in the following illustrations.

- | | |
|---|----------------------------------|
| (1) Vilken väg körde ni? | <i>Which road did you go by?</i> |
| (2) Vad vill du ha? | <i>What do you want?</i> |
| (3) Hur många av deltagarna fullföljde loppet? | |
| <i>How many of the participants completed the race?</i> | |

In this connection the Wh-Indefinite Clause can be regarded as a variant of the Plain Wh-clause and not as an alternative clause-type. The non-inverted Wh-clause and the Infinitive Wh-clause are also special variants of ignorative clauses, but restricted in use to direct questions. They do not meet all of the formal criteria above, but this is mostly for reasons of not meeting the conditions of the range of the operations. They do have interrogative interpretations, however, all ignorative Wh-words can be used, whereas deictic alternatives can not be used.

Most of the uses of Main Wh-clauses can be linked in one way or another to its use in direct questions. In any case they serve to introduce a topical domain of specification, even if that domain is not to be specified by an addressee in a following utterance, but by the speaker himself, as in headlines, book titles or rhetorical moves of an argument or lecture.

A special, clearly ignorative use of Main Wh-clauses, is when the speaker unexpectedly finds himself/herself searching for a specification, which apparently was supposed to be available when the utterance was planned.

- (4) Vi skulle åka med, ja vilken bil var det nu, det var nog den där svarta.
We were to go in, which car was it, I think it was that black one.
- (5) Så här gör du, ja, hur var det nu, ...
This is how you do it, how was it, ...

There are standard forms of this type, the most frequent ones in Swedish being *vad ska/skulle jag säga* (lit. what were I to say) and *vad heter det* (what's its name). The

latter is even used together with a specification simply as a marker of hesitation or uncertainty.

- (6) Vi skulle vad heter det gå på bio och ...
lit. *We were what's its name going to the movie and ...*

The use of *nu* (now) is very common in these clauses and is obviously related to its use in adverbial *nu*-clauses, which is described below. We could attribute this use of *nu* to the expression of a somewhat unexpected and suddenly realized ignorance; "I really ought to know this but just now I can't say it".

Plain Subordinate Wh-clauses are usually termed Indirect Questions when they stand as complements of predicates. This is appropriate for utterances of the following kind:

- (7) Hon frågade mig var jag bodde.
She asked me where I live.
- (8) Jag undrar vad hon sa till honom.
I wonder what she said to him.
- (9) De utreder vilken metod som är billigast.
They are analysing which method is the cheapest.

In all of these examples the subordinate clause can be called an indirect question in the real sense. It has domain structure, the ignorative property, the factivity property and the topicality property. The last one of these properties apply only in the situation which is reported, but this can be attributed to the fact that we have a subordinated clause embedded under a predicate and not a main clause. Embedding *per se* serves to relate the fact (or whatever) referred to by the embedded clause to something talked about, usually the subject referent, which means that the topic of the utterance has something to do with that relation, not just with (some part of) the indicated fact. von Bremen (1983: 95) has suggested that the difference between main and subordinate interrogative clauses (his terms being direct and indirect questions) should be attributed to a need of distinguishing syntactically between a speaker perspective and a subject perspective in relation to questions, i.e. to a need for not confusing direct and reported questions. The need for this distinction should not be questioned, but it should preferably be seen as one instance of a more general phenomenon which I propose should be described in terms of topic. Subordination may be seen as a feature of embedding, which in turn suggests that the content of the embedded clause should not be topicalized. This holds also for reports of assertive acts and beliefs. Compare the difference between the a- and b-sentences below.

- | | |
|----------------------------------|------------------------------------|
| (10a) Var bor du? | <i>Where do you live?</i> |
| (10b) Hon frågade var jag bodde. | <i>She asked me where I lived.</i> |

(11a) Jultomten finns.

Santa Claus exists.

(11b) Lisa säger att jultomten finns.

Lisa says that S.C. exists.

Strictly speaking, embedding should be sufficient to make the point and many languages do not make a formal difference between main and subordinate clauses. But the existence of such a difference makes it possible to make subtler differences between the situation one is talking about and the situation one is situated in. Main clauses, whether interrogative or declarative, can also be embedded, especially in the spoken language. Andersson (1976) argues that *att*-clauses with main clause word order, as in (12), are asserted. Similarly, a Main Wh-clause, embedded under an appropriate predicate, as in (13), is the vehicle of a question asked. In both cases they serve to introduce a new topic.

(12) Då tycker jag att ni får faktiskt ta er i kragen nu.

Now I think that you must pull your socks up.

(13) ... och då undrar jag, varför kommer man inte till samma resultat,
när man ändå utgår från samma siffror?

*... and then I wonder, why don't you come to the same conclusions,
when you start with the same figures?*

Conversely, subordinate clauses may occur free in Swedish, in particular in exclamations, but this can be explained with reference to the fact that any argument expression can occur free in an exclamative utterance.

Another reason why the term Indirect Question is appropriate for (7)-(9) is that the complements can actually be pronominalized by the phrase *den frågan* (that question), or can be paraphrased by means of an expression that categorize the referent as a question (cf. above 2.3.4).

(14) Hon ställde den frågan till mig.

She asked me that question.

(15) Jag undrar över den frågan.

I'm wondering about that question.

(16) De utreder nu frågan om vilken metod som är billigast.

They are now analysing the question of which method is the cheapest.

The predicates of (7)-(9) and (14)-(16) can be called Inquisitive. They typically report situations in which the subjects are engaged in a truly interrogative activity (cf. 2.3.3) This means that they have a kind of necessary ignorative perspective or that an informed perspective would go against the point of the utterance. Consequently these predicates are hard to use with *att*-clauses:

(17a) *Hon frågade mig att jag bodde i stan.
She asked me that I lived in town.

(17b) *Jag undrar att hon sa att hon skulle flytta.
I wonder that she said that she is moving.

(17c) *De utreder att den nya metoden är billigast.
They are investigating that the new method is the cheapest.

The Inquisitive predicates can be divided into three classes as follows:¹

I. INQUISITIVE PREDICATES.

(a) Predicates of Dialogical Acts.

Swedish: *fråga, fråga ut om, förhåra om, undra, spörja.*
English: *ask, question, inquire.*

(b) Predicates of Mental Acts.

Swedish: *undra, fråga sig, fundera över/på, tänka över/på.*
English: *wonder, ask oneself, ponder, consider.*

(c) Predicates of Investigative Acts.

Swedish: *undersöka, utreda, studera, forska i/om, räkna på, pröva, överväga.*
English: *investigate, study, test, consider.*

Closely related to the Inquisitive predicates in terms of the interpretation they impose on a Wh-complement are the following groups of predicates:

II. DELIBERATIVE PREDICATES.

(a) Overt deliberations.

Swedish: *avgöra, bestämma, besluta, fatta beslut om, fastställa, välja.*
English: *decide, choose.*

¹ -----
For each class I give a list of Swedish and English predicates that belong to the class. The Swedish list is fairly comprehensive and the predicates have been checked for their ability to take the type of Wh-complements under discussion. The English predicates on the other hand are given only as illustrations of the meaning of predicates in the class.

(b) Mental deliberations.

Swedish: *fundera på/över, tänka på/över, bestämma sig för, välja, ta ställning till/för.*

English: *think about, decide, take a stand on.*

III. ARGUMENTATIVE PREDICATES:

(a) Predicates implying disagreement.

Swedish: *diskutera, förhandla om, tävla om, bräka om, kämpa om, strida om, vara/bli oenig om, vara/bli ense om.*

English: *discuss, fight about, disagree on.*

(b) Predicates implying agreement.

Swedish: *ena sig om, vara/komma överens om, vara ense om.*

English: *agree.*

They have in common with Inquisitive predicates that the complement denotes something which is an issue of some sort. In fact, it can often be pronominalized by the expression *den frågan*, 'the question', just as the Inquisitive predicates:

- (18)a. Det avgörs i morgon vilka som får åka.
Tomorrow it will be decided who can go.

- b. Den frågan avgörs i morgon.
That question is decided tomorrow.

- (19)a. De var ense om vilka som skulle få åka.
They didn't agree about who could go.

- b. De var ense i den frågan.
They disagreed on that question.

With the exception of predicates that indicate disagreement these predicates readily accept affirmative *att*-complements. Thus, whereas Inquisitive predicates only allow an ignorative perspective, deliberative predicates also allow the factive perspective.

- (20) Det avgjordes att Erik skulle få åka. *It was decided that E. could go.*

- (21) De var eniga om att Erik skulle få åka. *They agreed that E. could go.*

Another point of difference with the Inquisitive predicates is in the nature of the

understood facts. In the case of Inquisitive predicates factivity means the assumed existence of true information, whereas in the case of Deliberative predicates it means the existence of an appropriate way of action. Disagreements, however, can be interpreted either way; you may disagree about what you are going to do, or about what the world is like.

This difference goes some way to explain the difference in complementization between Inquisitive and Deliberative predicates. In the case of a decision the correct specification comes with the decision, but this is not true of an answer to a question. To inquire about something is (usually) to be in a position of necessary ignorance, whereas to decide something, or thinking something over, is not. In the latter case I can change my state of ignorance at will.

Let us now look at some other classes of predicates that frequently take Wh-complements, where the complement can not be pronominalized by the phrase *den frågan*, the question'. The largest class here is a subclass of the class of factive predicates (Kiparsky&Kiparsky, 1970), which we can term cognitive factives. They have in common that the complement stands for a fact and that they allow this fact to be spelled out in an *att*-clause, which often can be prefixed by the phrase *(det) faktum* (the fact). Here are some typical examples:

- (22) Lisa känner till vilka ändringar vi har gjort.
Lisa knows which changes we have made.

cf. Lisa känner till att vi ändrat rutinerna.
Lisa knows that we've changed the procedures.

- (23) Då insåg jag vem hon var.
Then I realized who she was.

cf. Då insåg jag det faktum att hon var min gamla lärarinna.
Then I realized the fact that she was my old teacher.

- (24) Fotot visar var förråden är belägna.
The photograph shows where the stores are situated.

cf. Fotot visar att det finns förråd överallt i skogen.
The photograph shows that there are stores everywhere in the forest.

Some of these predicates accept the NP *den frågan* as an object, but then the interpretation is different. There is no context which would make (25) equivalent to (22).

- (25) Lisa känner till den frågan. *Lisa is familiar with that question.*

The interpretation of Wh-clauses as complements of cognitive factives differs from their interpretation as complements of inquisitive predicates in the following respects: (a) They are not interrogative; no answer is sought, neither in the situation reported, nor in the context of utterance; (b) They generally do not raise a topic;² (c) The speaker adopts an ignorative perspective, but is not necessarily attributing that perspective to anyone in the reported situation. Of course, often these predicates are used to report ignorative perspectives, as in negative variants of (22)-(24), but this does not imply that the speaker has the same kind of ignorative perspective.

But there are also resemblances. The interpretation of the Wh-complement has the domain property, factivity is assumed and, as just said, the speaker ignores the appropriate specification(s). There may be different reasons for this ignorative perspective. One concerns information structure; the utterance itself topicalizes a domain which concerns the relation between some person (or object) and a fact structured as a domain of specification, but does not topicalize that fact itself. Again, subordination implies detopicalization. Moreover, the use of Wh-clauses with these predicates can often be seen as a way of meeting conversational norms, such as the Gricean maxims. Sometimes the facts referred to are just too complex to be specified (Be brief), sometimes they can be assumed to be known by all participants (Do not make your contribution more informative than is required), sometimes the speaker himself does not know it (Do not say that for which you lack adequate evidence), and sometimes they are just irrelevant.³ (24) is a case where brevity may play a role, especially if the stores are many and situated at different locations. (26a-b) illustrates the maxim of quantity, and (27) the maxim of quality. (26b) also shows that irrelevant specifications may introduce ambiguities.

(26a) Vi vet alla varför vi är här.

We all know why we are here.

cf. Vi vet alla att vi är här för att besluta om ...

We all know that we are here to decide whether ...

(26b) Peter kommer så fort han har hört vem som vann landskampen.

Peter will come as soon as he has heard who won the international.

cf. Peter kommer så fort han har hört att Sverige vann landskampen.

Peter will come as soon as he has heard that Sweden won the match.

- - - -

² This may happen, though, in direct interrogatives of the form *Vet du Q?*, (Do you know Q?), where Q expresses a question.

³ Grice states his maxims in terms of what speakers say. I here take them to apply to specifications generally.

(27) Nu minns jag inte längre vad han hette.

I don't remember anymore what his name was.

cf. Nu minns jag inte längre att han hette Fredrik.

I don't remember anymore that he was called Fredrik.

The cognitive, factive predicates include the following subclasses.

IV. PREDICATES OF THE AVAILABILITY OF FACTS.

(a) Knowledge predicates.

Swedish: *veta, känna till, ana, ha reda på, vara medveten om, ha klart för sig.*

English: *know, be aware.*

(b) Predicates of understanding.

Swedish: *förstå, fatta, inse, begripa.*

English: *understand, realize.*

(c) Predicates of memory.

Swedish: *komma ihåg, minnas, glömma.*

English: *remember, forget.*

(d) Predicates relating to signs and sources of information.

Swedish: *visa, utvisa, ange, antyda, illustrera, ge exempel på, dölja.*

English: *show, indicate, illustrate, conceal.*

(e) Impersonal predicates.

Swedish: *märkas, synas, höras, kännas, framgå, vara en gåta.*

English: *be known, be unknown, be a mystery, be seen.*

V. PREDICATES RELATING TO THE ACQUISITION AND UNLEARNING OF FACTS.

(a) Personal predicates of cognitive events.

Swedish: *komma på, komma underfund med, få reda på, bli medveten om, få veta, inse, förstå, begripa, fatta, få klart för sig.*

English: *find out, get to know, realize.*

(b) Impersonal predicates of cognitive events.

Swedish: *stå klart för, gå upp för, visa sig.*

English: *be clear to, appear (to).*

(c) Predicates of memory events.

Swedish: *komma ihåg, minnas, dra sig till minnes, erinra sig, glömma, tappa bort.*

English: *remember, forget.*

(d) Predicates of perception.

Swedish: *se, höra, känna, känna på sig, märka, uppfatta,*

lägga märke till, upptäcka, uppmärksamma, bli varse.

English: *see, hear, feel, notice, discover.*

(e) Predicates of Active Acquisition.

Swedish: *se efter, titta efter, känna efter, höra efter, kontrollera, kolla upp,*

slå upp, ta reda på, lista ut, räkna ut.

English: *check, find out, make out.*

(f) Predicates of attentive perception.

Swedish: *observera, iaktta, ge akt på, lära sig.*

English: *observe, notice, learn.*

In the class (V.e) it is not always possible to pronominalize by the phrase *det faktum*. They accept *att*-complements which do not necessarily refer to an existing fact, but to a situation which ought to be in the prescribed way, as in (28).

(28) *Kontrollera att alla dörrar är låsta. Check that all doors are locked.*

In the last group (V.f) there are a few verbs that sound odd with an *att*-complement. (29b) sounds better than (29a):

(29a) *Vi iakttog/gav akt på att katten lekte med råttan.*

We watched/observed that the cat played with the rat.

(29b) *Vi iakttog/gav akt på hur katten lekte med råttan.*

We watched/observed how the cat played with the rat.

The complement undoubtedly refers to a factual situation, but this situation is not well reported by an *att*-complement, probably because the attentive nature of the

predicate reveals that the real domain of interest is some aspect of the development of the situation, not the situation as such. The same preference of *hur* over *att* can be seen with predicates of perception and predicates of memory events, as well as with some informative predicates (group VI.a below) when focus is on the situation as "developing" rather than merely "being". In fact, *hur* behaves very much like a complementizer in those constructions. What is peculiar with a verb such as *iaktta* (observe), however, is that it forces the complement to be interpreted as referring to a developing situation.

An interesting class of predicates that take Wh-complements are the Informative predicates, i.e. predicates that imply that information is transferred from someone (or something) to someone (or something). (30)-(32) are some examples:

- (30) Lisa sa vad han hette.
Lisa told (me) what he is called.
- (31) Läraren skrev upp vilka som inte var närvarande.
The teacher noted down those who were not present.
- (32) Bert förutsade vilken låt som skulle vinna.
Bert predicted which song would win.

Karttunen (1978: 172) makes the observation that sentences such as (30) entail that what is communicated by Lisa is something true, i.e. the Wh-clause has the property of factivity. However, if an *att*-clause is used, there is no such entailment:

- (33) Lisa sa att han hette Oskar.
Lisa told (me) that he is called Oskar.

However, things are not that clearcut. If (33) is negated, as in (34), a factive interpretation seems to be favoured, and the factivity of the complement in (30) can be cancelled, as in (35):

- (34) Lisa sa inte att han hette Oskar.
Lisa did not tell me that he is called Oskar.
- (35) När Lisa sa vad han hette, sa hon fel.
When Lisa told us what he is called, she gave the wrong name.

In (35) the reason for employing a Wh-complement must not be sought in the factivity of the complement, but in some other factor, say, in the maxims of manner or relation. We could also say that the complement here reports the underlying fact just as a topical domain of Lisa's utterance and not as something which was correctly specified.

In favour of the strong association between Wh-clauses and factivity it should be pointed out that the situation described by (35) is perhaps more accurately expressed by (35').

(35') När Lisa skulle säga vad han hette, sa hon fel.

When Lisa was to say what he is called, she gave the wrong name.

Here *skulle* (was to) implies that Lisa did not say what the person was called, although it allows us to construct the purported act as an act in which Lisa relates herself to the real name in agreement with the factive association. Thus, although the association between Wh-clauses as complements of informative predicates and facts is strong, factivity is not a necessary, uncancellable property of them.

Most of the Informative predicates are not factive, but there is variation. Often factivity seems to be a matter of degree. With a verb such as *tala om* (tell) a factive interpretation is definitely favoured, but with a verb such as *säga* (say) it is only favoured when the complement is a Wh-complement. If we replace *säga* with *tala om* in (30) and (34) the factivity of the complement is suggested even stronger, but also with *tala om* it is possibly to deny the factivity of the complement:

(36) För när Storfiskarn talar om hur stora fiskar han får, ja då skarvar han som han vill, då räcker armarna inte till.⁴

When the great fisherman tells about the great fish he catches, he makes up what he wants, his arms are not long enough.

Thus, the interpretation of a complement in this respect is not settled by considerations of just the verb and the type of complement, but other information has to be considered as well. This information may be given explicitly by the speaker, as in (35)-(36), but may have to be sought in the context. I conclude, though, that factivity is a favoured property of subordinate Wh-clauses with informative predicates.

This conclusion is supported by the difficulty of using Wh-complements with non-factive predicates. Compare the following pairs of examples:

(37)a. Erik anar vem det är. *Erik suspects who it is.*
(37)b. *Erik tror vem det är. **Erik believes who it is.*

(38)a. Hon talade inte om var den fanns. *She did not say where it was.*
(38)b. *Hon påstod inte var den fanns. **She did not claim where it was.*

(39)a. Det är känt vad han håller på med. *It is well known what he is doing.*
(39)b. *Det är sant vad han håller på med. **It is true what he is doing.*

- - - - -
⁴

From a song by Thore Skogman.

It is conceivable that utterances such as (37b)-(38b) could be interpreted as some kind of relation between the subject and a domain indicated by the complement. But, this is not the case. The reason for this is, I think, that non-factive verbs don't relate to facts but to candidate specifications, making it possible for the speaker to show both his own opinion and the opinion of the subject referent (if any) of that description. The choice of a non-factive verb suggests that the point of the utterance is, *inter alia*, to say something about a particular candidate specification, whereas the choice of an ignorative presentation of that specification suggests that it is not. The result is an utterance with no coherent interpretation.

There are non-factive verbs, however, that accept Wh-complements. One class of such verbs consists of verbs of conviction, whether those of the speaker or those ascribed to a referent. A few examples:

- (40) Det är väl självklart vem som vinner!
It's perfectly evident who is going to win!
- (41) Det är väl självklart att Lillen vinner.
It is perfectly evident that L. is going to win.
- (42) Erik är säker på vem som vinner.
Erik is sure who is going to win.
- (43) Erik är säker på att Lillen vinner.
Erik is sure that L. is going to win.

The att-complements of (41) and (43) are definitely non-factive, i.e. they express a candidate specification for which the subject, or the speaker, takes a stand. Yet it is possible to ignore the candidate specification while expressing the conviction in a way which makes it seem as if it relates to the fact itself. Interestingly enough, the past variant of (41), (41'), can not be used after the event, if Lillen, as a matter of fact, did not win. At most it could be used ironically.

- (41') Det var väl självklart att Lillen skulle vinna.
It was perfectly evident that L. was going to win.

Other non-factive predicates that take Wh-complements are predicates of imagination, such as *föreställa sig*, *tänka sig*, *göra sig en bild av*, *fantisera om* (all roughly meaning 'imagine'). With them also, a Wh-complement reports a fact, i.e. the fact that the subject tries to imagine and, hence, has a necessary ignorative perspective of. If the perspective has changed so that the subject is aware of the facts, a Wh-clause becomes less appropriate. Compare

- (44) Jag försöker föreställa mig hur hon ser ut.
I'm trying to imagine what she looks like.

- (45) Jag föreställde mig att hon var yngre.
I had imagined that she was younger.

Non-factive verbs that do not admit Wh-complements can generally be used in modal tags of the type *tror jag* (I think), *hoppas jag* (I hope), *är jag rädd* (I'm afraid) *antog hon* (she suppose), *svarade han* (he answered). This is further evidence that what is at issue with these predicates is an evaluation of a candidate specification (description), which must not be "ignored", if the utterance is to be coherent.

The class of Informative predicates include the following:

VI. INFORMATIVE (OR SPECIFYING) PREDICATES.

(a) Predicates of Verbal Information.

Swedish: *säga, berätta, tala om, meddela, rapportera, avslöja, redogöra för, beskriva, erkänna, förklara, antyda, låta förstå, insinuera, läsa upp, skriva.*

English: *tell, report, reveal, confess, imply, write.*

(b) Predicates of Judgement.

Swedish: *bedöma, uppskatta, beräkna.*

English: *evaluate.*

(c) Predicates of Conjecture.

Swedish: *gissa, tippa, förutsäga, förutspå.*

English: *guess, predict.*

(d) Predicates of Silence.

Swedish: *tala tyst om, låta vara osagt, tiga om, dölja.*

English: *conceal, be silent about.*

(e) Predicates of Non-Verbal Information.

Swedish: *visa, demonstrera, ange, bevisa, undervisa i, lära ut.*

English: *show, prove, indicate, teach.*

(f) Predicates of Storing Information.

Swedish: *anteckna, skriva upp, skriva ner, notera, bokföra.*

English: *note, write down.*

With these predicates Wh-complements clearly have the domain property and the ignorative property. They also indicate topicality in the situation reported and favour a factive interpretation. There is no necessary connection to interrogativity, however.

Another class of predicates that frequently take Wh-complements consists of predicates of relation, which are used to say something about how important a fact is for somebody, either generally or in relation to an activity of some sort.

VII. PREDICATES OF RELATION.

(a) Predicates of Interest and Care.

Swedish: *intressera, vara intresserad av, intressera sig för, bry sig om, ta hänsyn till, lägga sig i, strunta i, ge fan i, vara likgiltig för, ha med att göra, ignorera.*

English: *interest, be interested in, care, concern, ignore.*

(b) Predicates of Relevance.

Swedish: *vara viktigt, vara intressant, vara relevant, vara betydelsefullt, vara signifikant, spela roll (för), ha betydelse (för), betyda (för).*

English: *be important, be relevant, matter.*

All of these predicates take *att*-complements with a factive interpretation. The reasons for using a Wh-complement are very much the same as for the cognitive factives. The fact is possible to structure as a domain of specification and the correct specification is of no inherent interest in the present utterance, which instead is concerned with an evaluation of it along the dimension of importance. The relevant properties associated with the Wh-complements of these predicates are thus: ignorative presentation, domain structure and factivity. Two examples are given in (46)-(47).

(46) Regeringen måste också ta hänsyn till vad oppositionen tycker.

The Government must also consider the opinions of the Opposition.

(47) Det spelar ingen roll hur mycket den kostar.

It doesn't matter how much it costs.

Another class of predicates that take Wh-complements, sometimes two of them, are predicates of dependence. Some of these are listed below:

VIII. PREDICATES OF DEPENDENCE.

Swedish: *bero på, betinga, vara betingat av, vara avhängigt av, vara oberoende av, vara en slump, förklara, vara en funktion av, variera med, höra ihop med, hänga samman med, rätta sig efter, stå i proportion till.*
English: *depend on, be independent of, be random, explain.*

These predicates indicate a connection between two facts, or between two sets of facts, where the sets refer to facts of a similar domain structure. In the latter case the Wh-phrase truly behaves as a variable. The complements are necessarily factive. If the two facts are known and specifiable they are usually referred to by *att*-clauses, as in (50), but this is not possible when they are not known, as in (48). In case we are reporting a dependence between expressions having variable ranges, as in (49), an ignorative perspective is also necessary.

- (48) Hur skörden blir beror på hur mycket regn vi får den närmaste tiden.
What harvest we get depends on how much rain we'll get the next few weeks.
- (49) Hans åsikter rättar sig efter vem han talar med.
His views depends on who he is talking to.
- (50) Att skörden blev så dålig berodde på att det inte kom tillräckligt med regn.
That the harvest turned out so bad is due to the fact that we did not get enough rain.

Again we find the domain structure, the ignorative perspective and factivity as important features of the Wh-complement.

Another important class of predicates that take Wh-complements are predicates that relate a speech act, or a text, to its content, viz. its topical domain. I call these predicates Predicates of Subject-Matter.

IX. PREDICATES OF SUBJECT-MATTER.

Swedish: *gälla, handla om, ta upp, avse, berätta om, tala om, skryta om, säga något om.*
English: *be about, concern.*

Wh-complements of these predicates clearly indicate a domain and use ignorative presentations. They indicate a topic and they are factive, i.e. there is an assumption of existence of correct specification. There is no interrogativity. Two examples:

- (51) Det saken gäller är ju vem som har rätt.
What we're concerned with is who is right.

(52) Jag skulle vilja berätta något om vad som har hänt så här långt.

I would like to say something about what has happened up till now.

Wh-clauses of subject-matter are also common as prepositional attributes of NPs with head nouns indicating speech acts, ideas or other things that carry verbal information. The preposition used is normally *om* (about), although some nouns seem to prefer *över* (over). Nouns that are common with such attributive Wh-clauses are: *åsikt*, *uppfattning* (view), *påstående*, *uttalande* (statement), *skrivelse* (letter), *diskussion* (discussion), *rapport* (report), *PM*, *idé* (idea), *fråga* (question), *tanke* (thought), *lektion* (lesson), *bok* (book), *artikel* (article) and many others.

This survey of the use of subordinate complement Wh-clauses shows that the feature of interrogativity is not necessary. In fact, it requires strong evidence outside the Wh-clause, in the form of an inquisitive predicate, to interpret it as a question. What is recurrent, however, is the imposition of a domain structure on the fact implied by the Wh-clause and the ignorative presentation of the specification. Topicality is also a recurrent feature, but it is cancelable. In fact, the Wh-clause often has the effect of detopicalizing the content of the complement, i.e. making it appear as referring to a fact that is already known in sufficient detail. In this the subordinate Wh-clause differs considerably from a main Wh-clause. Factivity is also important, but is sometimes cancelable.

The factors that favour the use of a Wh-clause instead of an *att*-clause as a complement is thus the following: (1) the complement refers to something unknown or unsettled, i.e. there is a necessary ignorative perspective; (2) the complement refers to a fact, or a set of facts, with a clear domain structure, which is too complex to specify; (3) the specification of the fact referred to by the complement is not needed, possibly even counterproductive, to the point of the utterance. Conversely, a Wh-clause can not be used when the point of the utterance is to evaluate a description of a fact or a particular candidate specification, or when such an evaluation is attributed to someone else. This is the typical case with non-factive verbs relating to beliefs, wishes, hopes etc.

6.2.2.2 *Nu-clauses*. *Nu*-clauses are Wh-clauses that have quite a special, "ignorative" interpretation, which can be associated with the adverb *nu* (now). *Nu* is not always present, but if it is not, it can be inserted with no change in interpretation. *Nu*-clauses can appear in a number of different positions. They are frequently used as a kind of comment to what the speaker has just said (in a main clause), but could also, in a similar function, be put into the foundation.

(53) Stränderna, hela tiden stränderna. Där ville jag vara, där ville jag vistas,
vad det nu berodde på.⁵

⁵ From Ulf Lundell, *Vinter i paradiset*, Litteraturfrämjandet, 1982, p. 97.

*The beaches, all the time the beaches. That's where I wanted to be,
where I wanted to stay, whatever the reason could be.*

- (54) Vi måste hitta katten, var den nu gömmer sig nånstans.

We've got to find the cat, wherever she could be.

- (55) Hur det nu var så blev hon därinne ganska länge.

Whatever happened, she stayed in there for quite some time.

The *nu*-clauses have a typically ignorative character. Moreover, they usually signal a real ignorance on the part of the speaker. It is as if they substitute for information that would be appropriate to give in the context, but which the speaker for some reason is unable to provide.

They also have most of the formal properties of ignorative clauses. All of the Wh-words of table 2 can be used, they may be clefted and they may even contain multiple Wh-phrases, as in (56).

- (56) Skådespelarna som spelade de tre bockarna var bra, vem som nu var
vem av dom.

*The actors that played the three bucks were good, I don't know
who played which.*

They may not be sluiced, but this is probably for the reason that sluicing is restricted to complement clauses. von Bremen (1983: 76) notes that deictic pronouns are marginally possible, as in (57), but there is a definite difference in the status of Wh-words as compared to deictic words in this construction. Thus, the similarities in form and function is sufficiently strong to classify these clauses as ignorative.

- (57) Karl påstår att han har löst mysteriet, vem/?den han nu kan övertyga om det.

Karl says that he has solved the mystery, whoever he thinks he can convince.

Another frequent use of *nu*-clauses is as the last element of a disjunction. Its function is then to show the speaker's uncertainty about the specification(s) he has already used, as in (58)-(59), or to generalize the statement made, as in (60).

- (58) Jag höll på med min karriär då, sa han. Eller vad man nu ska kalla det.⁶

I was concerned with my career then, he said. Or whatever I should call it.

- (59) I så fall kunde han kanske stämma henne för egenmäktigt förfarande
eller orättmätigt förfogande eller vad det kunde heta.⁷

*In that case it might be possible for him to sue her on charges of unlawful
interference or unrightful possession or whatever it was called.*

⁶ Lundell, *ibid.*, p. 65.

⁷ From a serial story, *Änkehuset*, by Hans O Sjöström, published in *Folket i Bild*, Kulturfront, 1982.

- (60) Och så såldes dessa noveller, sagor, berättelser till tidningar eller vilka som nu ville köpa dem.⁸

And then these short stories, tales, narratives were sold to magazines or whoever wanted to buy them.

It is also possible to use such clauses as substitutes for proper specifications. This use is very similar to the use of main Wh-clauses in the ignorative mode, but with a subordinate clause instead.

- (61) Sen såldes dessa noveller till vem som nu ville köpa dem.

Then these short stories were sold to whoever wanted to buy them.

- (62) Vi satt därute mitt på vad det nu var för sjö och bara väntade.

We were sitting out there in the middle of whatever lake it was and just waited.

von Bremen (ibid.) refers to the first type of *nu*-clauses as *nescio*-sentences and the type occurring in (61)-(62) as *nescio*-free relatives (Nescio-QFRs). He proposes to account for the latter by deriving them transformationally from a structure where the *nu*-clause appears as a comment to an NP with an empty head. The effect of this transformation is to restructure the NP-S-sequence into a structure [NP: NP S] in which the Wh-clause occupies the position of a normal relative clause.

If we are only interested in the distribution of *nu*-clauses a transformational derivation seems quite unnecessary, a phrase structure rule would do the job. But von Bremen's interest is wider, he wants to account for the presence of Wh-words in constructions such as exclamatives, relative clauses and free relatives, the latter including the *nu*-clauses. The first answer he gives is the following (p. 85): "... GQFRs (i.e. Generalizing Free Relatives, LA) and *nescio*-QFRs contain Q-words, because they are basically emotive comment-sentences related to exclamations, and exclamations contain Q-words."

This answer seems to me to be unnecessarily far-fetched. It is true that some exclamations contain Wh-words, but the range of Wh-words that can be used in exclamations is much smaller than those that can be used in either questions or *nu*-clauses. Thus, *nu*-clauses contain Wh-words because they are, fundamentally, ignorative Wh-clauses. The reason why von Bremen does not see this is, I suspect, that he classifies the *nu*-clauses appearing in (61)-(62) as Free Relatives and is very concerned with maintaining a strict division between Free Relatives and Embedded Questions, i.e. Ignorative Subordinate Wh-clauses. Although he notes (p. 54) that GQFRs and *nescio*-FRs behave differently from ordinary free relatives in certain respects, he never questions their classification as Free Relatives.

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⁸ Lundell, ibid., p. 75.

Moreover, since the *nu*-clauses of (61)-(62) are classified as NP and those of (51)-(53) as S, von Bremen is forced to unite them through his reconstruction transformation. But the *nu*-clauses of (61)-(62) are not functionally different from those of (53)-(55), they are still ignorative comments, but happen to be used in a different syntactic position, and, so to speak, with a different target. Now, von Bremen claims that there is more to it than this; he emphatically states that they are not comments and that instead a change of denotation is involved, "they change/ from denoting a sort of proposition — though in questioned form — to the denotation of a (concrete) entity." (ibid. p. 84). But the feeling that a change of denotation is involved need not be attributed to the presence of the *nu*-clause, it is the context, in particular the verb and its selection properties, that is responsible for this. Therefore, we can maintain that the *nu*-clauses are clauses wherever they appear. Due to their function of expressing the speaker's ignorance or inability to select an appropriate specification, of whatever syntactic category, they are syntactically versatile.

In the synchronic description of Swedish von Bremen's transformation is therefore quite unnecessary. However, it is suggestive of the diachronic development of free relatives and indefinite/generalizing pronouns out of ignorative *Wh*-clauses and other ignorative phrases. For illustrations, see von Bremen (ibid. 114f.).

6.2.2.3 *Generalizing Wh-clauses*. Quite parallel to the *nu*-clauses are what we may term *än*-clauses, or generalizing *Wh*-clauses. The adverb *än* (-ever) plays a similar role in these *Wh*-clauses as *nu* does in the ones we have just looked at. It is usually present or could be inserted with no effect on interpretation. The interpretation of *än*-clauses is that they declare certain facts or factors irrelevant, which would normally be relevant in the situation described by the matrix sentence. This is what justifies calling them generalizing. A traditional term that is appropriate is *concessive*. Their effect on the overall interpretation is (usually) that the statement made in the matrix clause is emphasized or reinforced. As with *nu*-clauses they appear in many different positions. First a few examples where they occur outside of the complements in adverbial or appositional positions.

- (63) Jag vill inte tala med någon, vem det än är.
I don't want to speak to anybody, whoever it may be.
- (64) Hur hon än försökte fick hon inte upp locket.
No matter how she tried she couldn't open the lid.
- (65) Vart jag mig i världen vänder står min lycka i Guds händer.
Wherever I go, my fortune is in the hands of God.
- (66) Politikerna, hur ambitiösa och välvilliga de än är, kommer att
upplevas som en överhet av folket.
The politicians, no matter how hardworking and benevolent they are, will

be regarded as a ruling class by the people.

Just as for *nu*-clauses all ignorative Wh-words may be used. They are generally neither sluiced nor clefted, but there may be multiple Wh-phrases, as in the following example.

- (67) Jag tycker alla borde bestraffas, vem det än var som gjorde precis vad.
I think all of them should be punished, no matter who did exactly what.

Deictic pronouns can generally not be used instead of the Wh-words. When we paraphrase a generalizing Wh-clause we would normally come up with a concessive clause containing a universal quantifier, such as *alla* or *överallt*.

- (64') Trots att hon försökte på alla sätt fick hon inte upp locket.
Although she tried all possible means, she could not open the lid.

- (65') Överallt står min lycka i Guds händer.
Everywhere my fortune is in the hands of God.

Thus, formally they have much in common with ordinary ignorative Wh-clauses. But also functionally they are ignorative, not in the same sense as *nu*-clauses, but in the related sense that all possible specifications can be ignored on account of their irrelevance. Thus, where the commenting *nu*-clause is related to the ignorative perspectives "I don't know" or "I can not say", the generalizing Wh-clauses are related to the perspectives "It does not matter", "I don't care" or "No matter what you say".

Other properties of ignorative clauses are also present. The domain structure is evident. Given that all possible specifications are implicated, these clauses go beyond factivity, but generally the cases that count are the real ones. An utterance such as (64) offers a description of the subject's actions in the form of a Wh-clause and (63) either presupposes an instance of the generalizing Wh-clause or is meant to apply to one, which may occur in the future.

Considerations of both formal and functional properties of these clauses thus suggest that they can be regarded as a special case of Ignorative Wh-clauses.

Generalizing Wh-clauses, just as *nu*-clauses, are found in PP- and NP-positions.

- (67) Han sparar vad det än är han får tag på.
He saves whatever he gets hold of.

- (68) Vem han än talar med blir han förbannad på.
Whoever he talks to he gets mad with.

In these sentences the universal character of the interpretation is particularly strong. In other contexts we have an "indifferent" interpretation, i.e. the speaker allows the addressee a free choice of specification to suit himself.

- (69) Du kan komma när du vill (komma).
You can come whenever you like.

- (70) Han träffar väl vem han vill (träffa).
He can see whoever he likes to see.

The occurrence of the verb *vilja* (want) is no accident here. Phrases of the pattern WhP — NP — *vill* are idiomatic in Swedish, and sometimes behave almost as generalizing pronouns. Another type of generalizing Wh-phrase, which can no longer be used as a clause, is formed by means of the "suffix" *som helst*, yielding forms such as *vem som helst* (whoever, anyone), *var som helst* (anywhere), *vad som helst* (anything) etc. For illustrations of the same diachronic change in languages other than Swedish, see von Bremen (*ibid.*, p. 113f).

As far as the description of the distribution of the generalizing Wh-clauses is concerned, I see no reason to invoke a transformational treatment. Just as the *nu*-clauses they have a varied distribution, which, however, can be described by phrase structure rules. Their internal structure is the same as for any other subordinated, ignorative Wh-clause, i.e. that of rules (6a) or (6b) of 4.4.3.2. To account for the almost obligatory presence of the adverbs, we could treat them as special in the grammar, on a par with the negation or the complementizers.

6.2.2.4 *Exclamative Wh-clauses.* Syntactically we can distinguish between three different types of exclamative clause: main clauses, as in (71), free subordinate clauses, as in (72), and subordinate complement clauses, as in (73). Of the main clauses, we may distinguish a reflective or assertive type, which is similar to a rhetorical question in that it amounts to an assertion and a questioning type, which it is possible to give an answer to, or follow up by a candidate specification. The first type has a special variant that is obligatorily negative, as in (71a-b).

- (71)a. Hur länge sen är inte det.
 lit. *How long ago is not that.* = *That's a long, long time ago.*

- (71)b. Vilka talanger hade han inte!
 lit. *What talents had he not!* = *What talents he had!*

- (71)c. Vad pratar du för smörja!
What kind of rubbish are you talking!
- (71)d. Vem fan tror du att du är egentligen!? Einstein?
Who the hell do you think you are!? Einstein?
- (72)a. Vilken idiot jag är!
What an idiot I am!
- (72)b. Vad gullig den är!
How cute it is!
- (72)c. Vad den är gullig!
lit. What it is cute!
- (73)a. Då insåg jag vilken idiot jag hade varit.
Then I realized what an idiot I had been.
- (73)b. Du anar inte hur lite fantasi dom har.
You can't imagine how little imagination they have.
- (73)c. Det är fantastiskt vad hon är skicklig.
It is remarkable how capable she is.

Note the constructions (72c) and (73c) in which *vad* alone occupies the initial position, in spite of being semantically linked to a phrase in the body of the clause. In such constructions I analyze *vad* as a complementizer, whereas in the corresponding b-sentences it is assigned the category AA.

Exclamative Wh-clauses differ from Ignorative ones in many respects. (1) Only a subset of the Wh-words of Table 2 can be used, the most frequent ones being *vad*, *vilken* and *hur*. (2) Some of these words, especially *vad*, exclude ignorative interpretations. (3) The Wh-words of the subordinate clauses can be replaced by the deictic words *så*, *sådan* (so, such) with only a slight effect on interpretation, although the acceptability of this exchange is different for the different types. (4) There is generally neither clefting nor sluicing in exclamative clauses. (5) Multiple Wh-clauses can not be exclamative. Evidence for these claims is given by the following sentences:

- (74) *Det är fantastiskt vem som är en idiot.
It is remarkable who is an idiot.
- (75) *Jag undrar vad kul det var.
lit. I wonder what fun it was.

- (76) Så skicklig hon är!
lit. *So clever she is.*
- (77) Det är otroligt en sån idiot jag är!
lit. *It is incredible such an idiot I am!*
- (78) ?Du anar inte hur lite fantasi det är dom har.
You cannot imagine how little imagination it is that they have.
- (79) *Vilka talanger var det inte han hade.
lit. *What talents was it not that he had.*
- (80) *Han är en idiot och det är otroligt vilken!
He is an idiot and it is incredible what a!
- (81) *Hur lite fantasi vilken idiot har!
How little imagination what an idiot has!

These syntactic differences should not be surprising as exclamatives constitute a speech act type with its own characteristics. What these characteristics are is not so easy to specify and there are also differences between different types of exclamative utterances which complicate the picture. It seems safe to say that an exclamative utterance implies a fact, or other entity, which is in some way emotionally provoking. The exclamative always refers to that fact/entity whereas the provoked emotion is not necessarily verbally expressed. If it is expressed verbally, it is by means of an emotive predicate such as *fantastiskt* (fantastic), *otroligt* (unbelievable), *beklämmande* (depressing), *skrämmande* (frightening), or *märkligt* (remarkable).

What facts or entities are emotionally provoking? Again we must be careful not to generalize too much, but often it is a question of something extreme or unnormal. This deviance from the norm may relate to quantity, in which case a phrase with *hur* (how) or *vad* (what) would normally be used, but it may also relate to extreme perfection or imperfection with respect to character, type or performance, in which case a *vad*-phrase or *vilken*-phrase is used.

This relation to extremes is responsible for a typical feature of exclamative Wh-phrases, viz. their *determinate* interpretations (Grimshaw, 1979). This means that the specification that the Wh-phrase covers up for is extreme, e.g., towards one end of a scale, if the specifications are scalar. Compare (82) to (83) in this respect.

- (82) Han undrar hur mycket den kostar.
He is asking how much it costs.
- (83) Det är inte klokt hur mycket den kostar!
It's ridiculous how much it costs!

A neutral question such as the one reported by (82) does not presuppose that the answer will be deviant from expectations, but an exclamative does. An utterance of (83) indicates that the price came as a shock, i.e. that it is was much too expensive than could be imagined. We must not reduce the distinction between exclamatives and ignoratives to matters of determinate or indeterminate interpretations, however, as Grimshaw suggests. The most important reason is that such a reduction misses the emotive character of exclamatives. Grimshaw argues that the subordinate Wh-clause in (84) is ambiguous between an interrogative (i.e. ignorative in our terms) and an exclamative interpretation. One argument is that the clause can be disambiguated by the insertion of emotive adverbs such as *otroligt* (unbelievably), *enormt* (enormously) or *förskräckligt* (terribly), as in (85).

- (84) Vi visste inte hur mycket den kostade.
We didn't know how much it cost.

- (85) Vi visste inte hur förskräckligt mycket den kostade.
We didn't know how terribly much it cost.

But one may very well say here that it is the word *förskräckligt* (terribly) that gives (85) its exclamative character. (84) may of course be uttered in a context where it is known that the price is very expensive, but this fact in itself is not sufficient to make the clause exclamative; it is still just ignorative.

The emotive effect of an exclamative may be direct or reported. The free, subordinate exclamative clauses are usually immediate reactions to the perception of the fact in question, i.e. the fact strikes the observer so suddenly that the provoked feeling craves an outlet. The same is true for free exclamative Wh-phrases, such as *Vilken kvinna!* (What a woman) or *Vilket mål!* (What a goal).

Interestingly enough, the negative main clauses are less direct than the subordinate clauses in this respect. The two examples in (71) report facts which are already known, but which the speaker may have been reminded of for some reason, from what someone else has said or from what is happening in the context-of-utterance. Such exclamative clauses may also be outbursts, as in (86), but the implication of something already known is there.

- (86) Hur många gånger har jag inte sagt åt dig att ta undan dina leksaker!
How many times have I told you to tidy up your toys!

Embedded exclamative clauses can occur with many different types of predicates. Some of them are typically exclamative, such as classes X and XI illustrated below. Many predicates accept both ignorative and exclamative complements, however. This holds, for instance, of many predicates relating to the availability or acquisition of facts (groups IV and V, above) and some informative predicates (group VI).

X. PREDICATES OF EMOTIVE EFFECTS.

(a) Personal.

Swedish: *skrämma, förvåna, överraska, irritera.*

English: *frighten, surprise, shock.*

(b) Impersonal.

Swedish: *konstigt, otroligt, hemskt, skrämmande, frapperande, märkligt, förvånande, beklämmande, fantastiskt, ...*

English: *strange, unbelievable, remarkable, frightening, ...*

XI. Emphatic predicates.

Swedish: *betona, framhålla, understryka*

English: *stress, emphasize.*

All of these predicates are either factive or semi-factive. The cognitive factives and the informative predicates are typically negated when they take exclamative complements.

- (87) Du anar inte vad den är fin.

lit. *You do not suspect how nice it is.*

- (88) Det går inte att med ord säga vilken idiot han är.

One can't express in words what an idiot he is.

- (89) Jag kunde aldrig ha gissat hur gammal han var.

I could never have guessed how old he is.

This points to a connection between ignorative and exclamative situations that goes some way to explain the use of Wh-words in exclamatives, namely that a secondary effect of surprise, shock etc. is, on the one hand, disbelief and on the other dumbfoundedness or speechlessness. If Wh-words have a use as pointing to that which is assumed to exist, but cannot be said for reasons of ignorance then the extension to situations in which the Wh-word is a sign of emotive effects is not far-fetched. Difficulty of expression is one reason for choosing an ignorative perspective, which can be both a cause and an effect of emotions. Thus, the link between Wh-clauses and the expression of emotive effects of the indicated entity can become direct (cf. Wierzbicka, 1980: 330f for similar arguments).

The existence of Wh-clauses that can only be used in exclamatives, such as those with *vad* (what) in (72) above, means that we must make a difference between exclamations and questions also in the syntax. But it does not necessarily mean that we should

regard exclamative clauses as completely different from ignorative Wh-clauses. Exclamative clauses are factive and to a large extent ignorative, although in a peculiar way. Obviously the sense of *vilken* in an utterance such as (90) is different from its sense in (91); it relates to quality, not to identity. But it nevertheless suggests that what the speaker wants to express is not just the word *bil* (car), but something more, in the same way as the speaker of (91) is not satisfied with the phrase *en bil* (a car), but wants something more.

- (90) Vilken bil han har!
What a car he's got.

- (91) Vilken bil har han?
Which car is his?

6.2.2.5 *Relative Wh-clauses.* The most common way of forming relative clauses in Swedish is not by using relative pronouns or adverbs but by using a subordinate clause with a gap corresponding to the entity relativized on. If that gap occurs in subject position the complementizer *som* is obligatory, otherwise it is optional, but usually omitted.

The Wh-words that can be used as relative pronouns or adverbs are primarily *vilken* (-et, -a), *när* and *varför*. Apart from *varför* also other Wh-words of the form *var+P* can be used. A Wh-word, which is exclusively restricted to relative clauses, is *vars* (whose). The pattern of contrast between Wh-words and deictic words is very different in relative clauses as compared with interrogative clauses. With some categories the relative word is a Wh-word, with other categories a deictic word and in the case of temporal notions both alternatives may be used. Compare

- (92) Männen *vilka* vi talade med verkade mycket nervösa.
The men whom we talked to seemed very nervous.

- (93) *Männen *dem* vi talade med verkade mycket nervösa.
lit. *The men them we talked to seemed very nervous.*

- (94) Dagen *när* jag föddes var en söndag.
The day I was born was a Sunday.

- (95) Dagen *då* jag föddes var en söndag.
The day I was born was a Sunday.

- (96) ?Jag återvänder gärna till platser *var* jag varit förut.
I'm happy to return to places where I've been before.

- (97) Jag återvänder gärna till platser *där* jag varit förut.
I'm happy to return to places where I've been before.

This is one reason why relative clauses should not be regarded as ignorative clauses. They are also formally different in other ways, e.g., they can not be sluiced, they do not take multiple Wh-phrases and they are not generally clefted. Furthermore, the relative Wh-words do not co-occur with *som* in the same way as the ignorative ones. We may compare the relative clause of (98a) with the ignorative clause of (98b) in this respect.

- (98a) Männen, vilka (*som) hade väntat i timmar, var mycket trötta.
The men, who had been waiting for hours, were very tired.

- (98b) De ville veta vilka som / *vilka hade väntat längst.
They wanted to know who had been waiting the longest.

Relative Wh-clauses can have different functions. They may be attributive (restrictive) or appositive (non-restrictive). If they are attributive they may be identifying or elaborating and if they are appositive they may be explanatory or additive (cf. Wierzbicka, 1980: 316f). I give two examples of each kind:

Attributive identifying relative clauses:

- (92) Männen *vilka* vi talade med verkade mycket nervösa.
The men whom we talked to seemed very nervous.

- (99) Landet *varifrån* de kommer ligger mycket långt bort.
The country they come from is very far away.

Attributive elaborative relative clauses:

- (100) På gatan låg det en fågel vars ena vinge var skadad.
On the street there was a bird one of whose wings was damaged.

- (101) Jag kommer någon dag framöver när jag är ledig.
I'll come some day when I am free.

Appositive explanatory relative clauses:

- (102) Mannen, vars dotter nyligen dött, var mycket deprimerad.
The man, whose daughter had recently died, was very depressed.

- (103) På natten, när alla ljud hade tystnat, satt han och skrev.
In the night, when all sounds had ceased, he did his writing.

Appositive additive relative clauses:

- (104) Erik kunde inte komma, vilket var synd.
Erik couldn't come, which was a pity.

- (105) Det gick inga tåg den kvällen, varför vi blev tvungna att övernatta.
There were no trains that evening, so we had to stay overnight.

The identifying relative clauses of (92) and (99) are pragmatically necessary. They are used with the presumption that the head noun by itself is not sufficient to pick out a unique referent. This pragmatic necessity may be compared with the pragmatic necessity of expressing the frame of a question. Thus, there is a similarity between an NP without an identifying relative clause and a sluiced question!

- | | |
|-----------------------------------|-----------------------------------|
| (106a) Männen vilka vi talade med | <i>The men whom we talked to.</i> |
| (106b) Männen | <i>The men</i> |

- | | |
|---------------------------------|-----------------------------------|
| (107a) Vilka män talade ni med? | <i>Which men did you talk to?</i> |
| (107b) Vilka (män)? | <i>Which (men)?</i> |

The similarity resides in the amount of information given about the referent. A relative clause and an interrogative clause has to be equally transparent with respect to their referents. Another way of expressing the similarity is by saying that both a relative clause, such as (106a) and a question, such as (107a), contain an instruction to the addressee to identify a certain referent, which is a group of men such that we talked to those men. This kind of analogy can be made generally between relative clauses and questions (Winograd, 1972: 51f; 137f).

The similarity should not be exaggerated though. Sluicing is conditioned by current topics in a way which relativizing is not. And relativizing is not an independent speech act in the same way as a question, i.e. it cannot constitute a conversational contribution (a turn or move) in a dialogue.

For the other three types of relative clauses it is clear that they are not pragmatically necessary in the same sense as an identifying relative clause. Yet their embedding in

another clause is usually significant. Wierzbicka argues at length that the attributive relative clauses of (102)-(103) have an explanatory function (and that is why I have called them so). This is not to say that this explanatory function can be captured by a single category, only to give a rough indication of their function.

An alternative to using an elaborative or appositive relative clause is to express the same information in a following sentence. Instead of (100), (102) and (105) we could say (100'), (102') or (105'), respectively.

(100') På gatan låg det en fågel. *Dess* ena vinge var skadad.
On the street was a bird. One of its wings was damaged.

(102') Mannen var mycket deprimerad. *Hans* dotter hade nyligen dött.
The man was very depressed. His daughter had recently died.

(105') Det gick inga tåg den kvällen. *Därför* blev vi tvungna att övernatta.
There were no trains that night. Therefore we had to stay overnight.

When in this way to sentences are juxtaposed, a reference in the second sentence to an entity referred to (or introduced) in the first clause is always made by a deictic (anaphoric) pronoun. This suggests that for a narrative discourse the distinction between Wh-words and deictic words can be associated with a difference between embedding (subordinating) and juxtaposing information. But what could the functional difference be, between embedding and juxtaposition? The relation between two sentences that are juxtaposed could be almost anything that can be put under the rubric of relevance. But embedding by means of a relative clause is possible only if the relative clause is about the same thing as the matrix clause, either about some referent of the matrix clause, or the expressed fact as a whole. To speak with Wierzbicka (ibid., p. 321), an attributive, explanatory relative clause "have the purpose of explaining in what light the speaker is thinking of the person (object) in question" or (p. 320) "(to draw) attention to something which may help the addressee to understand not the main dictum as such (i.e. what is said in the matrix clause), but its implications or significance". The last point provides a link to the identifying relative clauses; just as identifying relative clauses do, explanatory relative clauses provide information that allow for a proper understanding of what the speaker is saying in the matrix clause.

This link between identifying and explanatory relative clauses is not so easily extended to the additive ones. An additive relative clause often has the status of a comment or evaluation of the information given in the matrix clause, as in (104). But this is not always so as (105) illustrates. What we can say is that the additive relative clause provides a means of saying something more about the fact that has just been expressed, as a sort of aside. They are obviously connected to elaborative relative clauses, however, the difference being that additive clauses relate to facts, whereas elaborative clauses relate to objects.

Wierzbicka also manages to make a connection to ignorativeness. She says that both types of attributive relative clauses assume a certain ignorance on behalf of the addressee, which makes it difficult for him to receive the intended message. But this can be said about almost anything that a speaker says to an addressee. Moreover, the distinction between ignorative and informative clauses that we have started with is concerned with a sender's ignorance, either the speaker's own ignorance or that of a reported sender/agent, and relative clauses are as compatible with an ignorative perspective as they are with a factive perspective.

The use of Wh-words in relative clauses can therefore not be explained with reference to the property of ignorativity. In the grammar, therefore, I treat Relative Clauses as a clause-type different from Ignorative Clauses. What they clearly have, however, is factivity and topicality. This makes it possible to see relative and ignorative clauses as related, although different structures.

6.2.2.6 *Free Relatives*. By a free relative I here mean a relative clause that either lacks a head completely, or is headed by a proform. Most headed free relatives in Swedish are headed by a deictic pronoun, as in (108)-(110), but the Wh-word *vad* can be used as head of free relatives and is in fact often preferred to the deictic alternatives *den/det*.

(108) Den/*Vem som gjorde detta måste dö.

The one who did this must die.

(109) Det är fullt av myror där/*var vi sitter.

There are so many ants where we are sitting.

(110) Vi köpte det/vad hon helst ville ha.

We bought what she wanted most of all.

In these examples the free relatives have definite referents, but this is by no means always the case. In fact, one reason why *vad* may be preferred to *det* is that it is less tied to presuppositions of unique reference. Thus, a free relative with *vad* often has a sense of generality or totality, as in the following examples.

(111) Vad som göms i tö kommer upp i snö.

What is hidden in snow comes up in thaw.

(112) Man kan inte tro på vad han säger.

You can not believe what he says.

(113) Han får vad han behöver.

He gets what he needs.

A free relative has more in common with an attributive, restricted relative clause than it has with an ignorative clause. Not all *wh*-words are possible, in fact, most of them are not possible at all, whereas instead deictic words are favoured. They cannot be sluiced, nor is it possible to use multiple *Wh*-words or *Wh*-indefinite descriptions. Functionally, they serve to identify, or characterize, a referent, just as restrictive relative clauses normally do, being indifferent to the ignorative/informative distinction. Thus, they are not Ignorative *Wh*-clauses.

Free relatives must not be identified with ordinary relative clauses, however. For example, the free relative in *vad* can not be used as an ordinary relative clauses. Conversely, most Swedish relative *Wh*-clauses can not be used free. One possible exception is the temporal adverbial clause introduced by *när* (when), which may be regarded as a free relative clauses, filling an adverbial function.

A possible connection with ignorativity can be made in the case of the generalizing free relatives. They are used when the referents have no common nominal category, as in (111), or when it is better not to mention that category or it can be understood, as in (113). Another connection may be seen in the frequent use of *vad*-free relatives in meta-expressions of the following kind.

- (114) Vi kom in i vad som måste ha varit matsalen.
We entered what must have been the dining-room.

- (115) Hon äger vad man brukar kalla ett gott hjärta.
She has what is usually called a kind heart.

This is a common use also of the *nu*-clauses that were considered above, but for them there is no restriction to the single word *vad*.

6.2.2.7 *Pseudo-cleft constructions.* A Pseudo-cleft construction is a copular construction with a clausal subject and a second element which has a syntactic connection with that clause:

- (116) Vad jag behöver är en stor öl.
What I need is a large beer.

- (117) Vad vi skulle haft stor nytta av, det hade varit en liten kurs i, säg, jordbruk.
What we would have benefitted from, that would have been a course in, say, agriculture.

- (118) Vad hon lever för är sina barn.
What makes her life worth living is her children.

In all of (116)-(118) it is possible to use *det* instead of *vad*. This fact suggests that the

subject clause is, in fact, a free relative, since it does after all occupy an NP-position. But the subject position of the copula is not exclusively restricted for NPs, so the conclusion may be too hasty. Something speaking against that conclusion is that apart from *vad* we may use other Wh-words in a Swedish Pseudo-cleft. Examples such as (119) are frequently said (although less frequently written) and even (120)-(121) are marginally possible.

(119) Varför jag tar upp detta är för att visa ...

Why I mention this is to show ...

(120) ?Var jag vill bo är i en liten stuga på landet.

Where I want to live is in a small cottage in the countryside.

(121) ?När han kommer tillbaka är på en tisdag.

When he returns is on a Tuesday.

In these examples the deictic counterparts can not be used, which suggests that the subject clauses are not free relatives, but rather ignorative clauses. However, the variety of Wh-words found with the ignorative clauses is not present, e.g., we cannot use the common Wh-words *vem* or *hur* in a Swedish Pseudo-cleft. Also, the syntactic versatility of ignorative Wh-clauses is not found.

The information structure of a Pseudo-cleft is reminiscent of that of a question and a following answer, although not all sequences of Wh-questions and answers can be transformed to the format of Pseudo-clefts. But it seems correct to say that the subject clause introduces a domain of specification, which is then specified by the post-copular element. In that respect the pseudo-cleft resembles copular constructions of the following kind, where the subject NP also introduces a domain of specification.

(122) Mitt namn är Andersson.

My name is Andersson.

(123) En nyhet i år är att ...

An innovation this year is that ...

Pseudo-clefts differ from these sentences in the emphasis put on the specification. It is expressed as a favoured alternative, or as an alternative of special relevance, perhaps being contrasted with other real or potential alternatives. (117) is taken from a course-evaluation, where the speaker contrasts his own suggestion with courses that he has experienced as part of that course, and the other examples are emphasizing the unique character of the mentioned specification. A Pseudo-cleft is thus similar to an ordinary clefted construction, but with characteristic traits of its own.

Although a Pseudo-cleft is more similar to an ignorative Wh-clause than an ordinary free relative, I regard it as a variant of the free relative for syntactic reasons. It may be analysed as an NP both structurally and functionally. In the grammar I describe these clauses by use of the descriptor [WHM F], but it may be suggested that the Wh-words of Free Relatives and Pseudo-clefts should not be treated as having the

feature WH at all, but rather be classified as determinative pronouns that occupy the nominal position of an NP.

6.2.3 *Conclusions.* In the spirit of Wierzbicka (1980) I have attempted to subsume the notion of an interrogative Wh-clause under the more general notion of an ignorative Wh-clause. On the one hand I have shown that the label 'interrogative' is a misnomer in many cases where it has traditionally been employed, in particular in connection with so called indirect questions. On the other hand I have shown that for both formal and functional reasons Main Wh-clauses, Subordinate Complement Wh-clauses and Adverbial Wh-clauses of the types here called *nu*-clauses and *än*-clauses can be grouped together as Ignorative Wh-clauses. The Ignorative Wh-clauses have a vague boundary with Exclamative Wh-clauses, but on the grounds that exclamative clauses have characteristic properties, whether they are Wh-clauses or not, and that they favour certain Wh-words and even have special Wh-constructions, they should be treated as a special type of Wh-clause, distinct from the Ignorative clauses. There is also a strong affinity between certain ignorative Wh-clauses and the Wh-clauses appearing in Pseudo-cleft constructions. However, it seems preferable to assimilate the clauses headed by *vad* in Pseudo-clefts to the Free Relatives, since they are in complementary distribution, appear only in NP-positions and can be paraphrased by an NP using a deictic pronoun, such as *det* instead of *vad*.

Relative clauses can also have Wh-words in Swedish, but they are not ignorative clauses. First of all, they employ a restricted set of Wh-words, sometimes different ones from those that may appear in ignorative clauses and are also formally different in other ways. Secondly, their function is different, as they provide information that enhances understanding rather than concealing it. Therefore, relative clauses are not ignorative in spite of the resemblances that can be found.

In the grammar I distinguish between Ignorative, Exclamative, Free Relative and Relative clauses in the feature SFORM. When they are subordinate they have either of the values *som* or Nil for the feature COMP. Relative clauses cannot be main, but Ignorative and Exclamative clauses can be, and are then compatible with a foundation having the feature WH. The distinction is not restricted to the feature SFORM, however. To show the interdependencies between clause-type and Wh-words a feature WHM is used, which takes I, E, F or R as values.

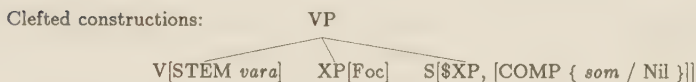
6.3 The Complementizers OM and att.

6.3.1 *The Feature COMP and its Values.* The feature COMP defines the following system of values:

COMP { *att*, *om*, *som*, *vad*, *att'*, Nil }

Of these *att'* is restricted to infinitive clauses and *vad* is the complementizer of a particular kind of exclamative clause discussed in 6.2.2.4. Nothing more will be said about them.

The Wh-clauses discussed in 6.2 have been analyzed in terms of a foundation and a verbal projection with a gap. The value of COMP for the latter clause is either *som* or Nil. *Som*, alternating with Nil, is also found in relative clauses and clefted constructions. Thus, we have the following typical configurations for *som*/Nil:



A clause with *som* need not always stand immediately to the right of its "filler", and may not even form a (continuous) constituent with it. But it always contains a gap; moreover, this gap is not inherited from the constituent which immediately dominates it, but introduced because of a direct relation between the clause and some other constituent in its environment. When *att-* or *om-*clauses contain a gap, on the other hand, it is inherited from some dominating node having a direct filler-gap relation with some other node. Compare (124a), where the filler-gap relation is introduced at top level, to (124d), where it is introduced between the subordinate clause and the preceding NP.

- (124a) Biljetterna trodde jag att jag hade glömt.
 The tickets I thought I had forgotten.

- (124b) *Biljetterna trodde jag som jag hade glömt.
 The tickets I thought som I had forgotten.

- (124c) *Jag hittade biljetterna att jag hade glömt.
 I found the tickets att I had forgotten.

- (124d) Jag hittade biljetterna (som) jag hade glömt.

I found the tickets (that) I had forgotten.

For more data and a discussion about the distribution of *som* within a transformational framework, see Andersson (1975).

The value Nil for COMP may also alternate with *att*. Compare (125), where Nil alternates with *som*, to (126), where it alternates with *att*.

(125a) Köttet *han åt* var dåligt.
The meat he ate was off.

(125b) Köttet *som han åt* var dåligt.
The meat that he ate was off.

(126a) De trodde *han åt*.
They thought he was eating.

(126b) De trodde *att han åt*.
They thought that he was he eating.

The difference between (125a) and (126a) is accounted for in the feature SLASH, which is present in the latter, but not in the former sentence.

The value Nil, just like *som*, has primarily structural implications. Although Nil is compatible with both "slashed" and "non-slashed" clauses, it can only occur with a clause that has a subject in the ordinary subject position.

6.3.2 *The Distribution of 'att' and 'om'*. In this section the distribution of *att* and *om* is compared. First I look at the complement clauses containing one of these complementizers. For them the contrast between *att* and *om* exactly mirrors the contrast between Declarative and Interrogative main clauses, with the following minor exceptions: (i) *att* can be left out of a declarative complement, whereas *om* can not be left out of an interrogative complement; (ii) *om* can be replaced by alternatives such as *hurvida* or *ifall*.

There are predicates that accept *om*-clauses as complements but not *att*-clauses. They are first and foremost the Inquisitive predicates, as illustrated in (126a-b). But also many Argumentative predicates have this property, as illustrated by (127).

(126a) Hon undrade *om/*att* vi ville komma.
*She wondered whether/*that we wanted to come.*

(126b) De undersöker *om/*att* det är möjligt.
They are investigating whether it is possible.

- (127) De blev oense om huruvida/*att det var möjligt.
*They could not agree whether/*that it was possible.*

There are also predicates that accept declarative complements, but not interrogative ones. Typical among these predicates are non-factive predicates expressing belief, opinion, possibility, supposition, etc. A few illustrations:

- (128a) Erik trodde att/*om kvinnan var sjuk.
*Erik thought that/*whether the woman was ill.*
- (128b) Vi utgår ifrån att/*om vi blir underrättade om något händer.
*We take it for granted that/*if we will be informed if anything happens.*
- (128c) Han krävde att/*om beslutet skulle rivas upp.
*He demanded that/*if the decision should be rescinded.*

From this it appears that *om*-clauses have the same distribution as ignorative *Wh*-clauses. This is not the case, however. Predicates that accept *om*-complements, but are hard to use with ignorative complements are those that express doubt, such as *tvivla på* (doubt), *vara tveksamt/tvivelaktigt* (be doubtful) and *ifrågasätta* (question). The impersonal predicates of this class do not readily accept a declarative complement, either.

- (129a) Det är tveksamt om/?att han klarar av det.
It is doubtful whether/that he would manage it.
- (129b) ?Det är tveksamt vad han klarar av.
It is doubtful what he can manage.

On the other hand there are quite a number of predicates that accept Ignorative complements, but not *om*-clauses, e.g., predicates of conviction, imagination, and teaching.

- (130) ?Det är självklart om han vinner. *It is evident if he wins.*
- (131) Det är självklart vem som vinner. *It is evident who will win.*
- (132) *Jag föreställde mig om hon var vackrare än så.
I imagined whether she was more beautiful than that.
- (133) ?Han lärde mig om det är nödvändigt med tålamod.
He taught me whether patience is necessary.
- (134) Han lärde mig vad som är nödvändigt här i livet.
He taught me what is necessary in life.

Finally, there are many predicates that can take both *om*-clauses and *att*-clauses as complements, most of which accept Ignorative complements as well. Here we find the large group of cognitive factives, and the predicates of information and relation, among others. Thus there are contrasts such as the following.

(135a) Pelle vet {att / om} dom är hemma.

Peter knows {that / whether} they are at home.

(135b) Pelle vet var dom är.

Peter knows where they are.

(136) Jag kände efter {att / om} den låg kvar i fickan.

I felt {that / if} it was still in my pocket.

(137) Det intresserar henne inte {att / om} han har pengar.

It is of no interest to her {that / whether} he's got money.

With a cognitive factive, such as (135a), the use of *att* indicates that the complement expresses a fact. In other words, the speaker vouches for the truth of the complement. By using *om* instead of *att* the speaker leaves the truth of the complement open. The other two illustrations are quite similar, although the predicate *känna efter* itself indicates that there is some uncertainty about the truth of the complement. Still, this uncertainty is much more marked with *om* than with *att*.

Thus, the *om*-clause, just as the Ignorative, provides a means of referring to facts, without revealing what they are. The *om*-clause differ from the Ignorative in focusing attention to one particular candidate specification, however, presumably because that specification is of special importance. If we compare (135a) with (135b), the former is likely to be used if the speaker or the addressee has a special interest in finding the subject at home, whereas it is of less importance where he is, if it happens that he is not at home. Thus, where the Ignorative treats all possible candidate specifications of the relevant domain as equal, the *om*-clause makes it possible to focus on one specification of particular interest in the context.

We may say that the use of *om* in complement clauses is associated simultaneously with an ignorative perspective of an assumed fact and a non-affirmative presentation of a candidate specification. What this means is that the properties of factivity and domain structure associated with ignorative Wh-clauses hold, whereas the mode of presentation is not ignorative in the full sense, but rather dubitative, i.e. without confidence in the mentioned candidate specification.

Let us test this hypothesis on the cases we have looked at so far. With the complements of Inquisitive predicates, where *att* is not possible, the complement refers to a question in the reported situation and the first two properties consequently hold. We also have topicality in the reported situation. The difference between an ignorative

complement and an *om*-complement can be attributed to the fact that the latter always expresses a candidate specification, and is exactly parallel to the difference between a main Wh-clause expressing an x-question and a main interrogative clause expressing a nexus-question.

If we then look at the cases where ignorative complements are possible, but not dubitative ones, our hypothesis goes some way to explain the facts. For example, what you teach is a subject, a domain of knowledge, or perhaps a rule or a fact. In the first case an ignorative presentation is adequate and in the second case an affirmative one. What you imagine is either a situation, i.e. something whole, falling under some general category such as event, appearance etc., in which case an ignorative Wh-complement is adequate, or a candidate specification. In the latter case, however, the perspective is no longer ignorative; the candidate specification is an achieved result, not something the correctness of which is being put into doubt. It follows from the meaning of the predicate that the specification probably is not correct. With predicates of conviction the situation is quite similar; if you choose to express a candidate specification you do so, not because of any doubt in its correctness, but on the contrary, because you are asserting it. Hence, *om* is out of place.

The predicates for which ignorative complements are out of place are in particular the non-factive predicates that express a relation between an agent and a candidate specification, or some evaluation of a candidate specification. With most of these *att* is used, although with some of the predicates that express doubt, *om* is, or could be used. It seems that with the predicates of doubt the criteria for using *att* (there is a relation to a candidate specification) and the criteria for using *om* (the correctness of the candidate specification is an issue) are both satisfied. Which complementizer a predicate prefers is then a matter of lexicalization. Of the relevant predicates in Swedish the personal *tvivla på* (doubt) prefers *att*, *ifrågasätta* (question) goes with both *att* and *om*, whereas the impersonal *vara tvivelaktigt/tveksamt* (be doubtful) prefer *om*.

Factive predicates have the special property that the speaker becomes responsible for the correctness of the complement if he uses an *att*-clause. To choose an ignorative or dubitative complement is therefore a way of escaping that responsibility, a way of not saying what the facts are, although the complement refers to a fact. Again, this is to adopt an ignorative perspective wrt a domain, where, in the case of an *om*-clause, that perspective is coupled with a dubitatively presented candidate specification.

Thus, I think we can conclude that the ignorative/dubitative character of *om*-complements holds good, although the nature of the predicate is important for reaching a more detailed interpretation.

Next consider non-complement clauses. *Om* has a very frequent use in conditional clauses just as the English *if*.

- (138) Om det blir regn, stannar vi hemma.

If it rains, we'll have to stay at home.

- (139) Vi kommer att vara klara till kvällen om vi kan hålla det här tempot.

We'll be ready by tonight, if we can keep up the pace.

A condition can be analysed as an unrealized cause. If it is expressed at a time when it can still be realized, although it is not known whether it will be, we have a typical case of a candidate specification being presented in the dubitative mode and thus a context in which it would be appropriate to use *om*. Of course a dubitative marker in itself can not be responsible for the conditional interpretation, but this kind of polysemy appears to be common in the languages of the world (cf. Andersson, 1975: 193f).

A conditional relation may be seen as a special case of a causal relation. When a causal relation of facts is to be expressed *om* can not be used. Instead a "declarative" conjunction, such as *därför att* (because) or *eftersom* (since) is necessary. A causal relation of possible facts, such as in (138) and (139), uses *om* or its equivalent *ifall*. But also causal relations involving non-facts favours *om* or a conjunction containing it. We may compare the following sentences.

- (140) Katten kunde smita *därför att* du inte vaktade den.

The cat could run away because you did not watch it.

- (141) Katten hade inte kunnat smita *om* du hade vaktat den.

The cat could not have run away, if you had watched it.

- (142) Katten smet *trots att* jag vaktade den.

The cat ran away, although I watched it.

- (143) Katten hade smitit *även om* jag hade vaktat den.

The cat would have run away, even if I had watched it.

In (141) and (143) *om* is used with non-facts, i.e. not realized possibilities.⁹ (141) is conditional, whereas (143) is concessive. (140) and (142), on the other hand, express facts, (140) with a causal relation and (142) with a concessive relation. In my view, this association of *om* with the unrealized can only be derived from its use with conditions. There is no way in which it can be directly related to the dubitative *om* appearing in complement clauses. Note that *även om* also may express the realizable, as in (144).

- (144) Katten smiter *även om* du vaktar den.

The cat will run away even if you watch it.

⁹ - - - -

Om in itself does not mark the clause as counterfactual. This is instead indicated in the verbal system, here, by the use of the pluperfect (cf. Fauconnier, 1985: 111f.).

The extent to which *om* and *även om* express relations in adverbial clauses can be seen in the fact that they may be used even with clauses that express facts, as long as the fact amounts to a concession. We have examples such as (145).

- (145) Han tog sig i mål, *även om/om* än det var med en viss möda.
He made the finishing line, even though it cost him quite an effort.

The use of *om* with counterfactual clauses is also seen in comparisons, such as (146).

- (146a) Han betedde sig som *om* det var han som var chef.
He behaved as if he was the boss.

Also with comparisons it seems that *om* has been generalized to cases where its clause is expressing a fact. We find constructions of the following form, where the comparison between the *om*-clause and the matrix clause has a concessive tint.

- (146b) *Om* det var svenskarna som anföll mest, så var det ändå danskarna som gjorde målen.
(Even) if the Swedes were attacking the most, it was still the Danes that scored the goals.

The use of *om* with counterfactuals is restricted to non-complement clauses. In complement clauses *att* goes with the counterfactual, e.g., in complements to predicates such as *inbilla sig* (imagine), *låtsas* (pretend), *hoppas* (hope). This is another reason for not relating this use directly to the dubitative *om*.

There are other uses of *om* in non-complement clauses, which have a direct relation to its dubitative use. One such use is similar to the ignorative *nu*-clauses (6.2.2.2). It is similar, first because a *nu* is often expressed, and secondly, because it functions as a kind of comment on what has just been said.

- (147) Han gör ett lite underligt intryck på folk, *om* du förstår vad jag menar?
He makes a somewhat strange impression on people, if you get my point?

- (148) Han skulle ta med sig en tjej *om* jag (nu) förstod honom rätt.
He was going to bring a girl along, if I got him right.

- (149) Jag är inte så pigg på att följa med, *om* (nu) sanningen ska fram.
I'm not that keen on going, to tell you the truth.

With these *om*-clauses the border between interrogative and conditional is not so easy to determine. (147) can be heard as a question, but that may be due to the fact that the *om*-clause expresses a B-domain. (148) may be pronounced as a question, but also expresses a condition for the correctness of the matrix clause. (149) expresses a condition for saying what is said in the matrix clause, but not a condition for its truth.

Thus, what these examples illustrate, is, again, that ignorativity, and here the special case of doubtfulness, is compatible with other aspects of content, in particular factors that condition other events. Both aspects of content may be present, or only one of them, depending on the circumstances.

The congruence of dubitative and conditional interpretations is further illustrated by a type of construction studied by Ekerot (1976), which he calls "conditional complements". It occurs with with certain factive predicates, in particular predicates of perception, predicates of attitude and predicates of emotional effects. A few illustrations:

- (150) Dom ser om vi tar den.
They'll notice (it) if we take it.
- (151) Vi uppskattar om du kommer.
We would appreciate it if you could come.
- (152) Det oroar henne om dom inte hör av sig.
She gets worried if they do not get in touch.

In all of these sentences *om* may be replaced by *att* and that is a reason to call them complements, i.e. they occupy complement positions and express arguments of the predicates. This replacement effects the change of interpretation that is expected with a factive verb: the complement clause will express a fact, not just a possibility.

On the other hand the *om*-clauses express events that condition the event (or state) expressed by the matrix clause. This is perhaps best seen by possibility of paraphrasing the sentences with the use of an adverbial *om*-clause.

- (153) Om vi tar den (så) ser dom det.
If we take it, they'll notice.
- (154) Om du kommer (så) uppskattar vi det.
If you come, we would appreciate it.
- (155) Om dom inte hör av sig så blir hon orolig.
If they don't get in touch, she'll be worried.

We could say that the *om*-clause in these sentences expresses something which is at the same time a participant (something noticed or affecting one's emotions) and a circumstance (a cause or condition). Paraphrases that bring out both aspects are possible, as in (156)-(157), but sound too meticulous. At least we would pronominalize the second instance of the clause, as in (153) and (154).

- (156) Om vi tar den ser dom att vi tar den.

If we take it, they'll see that we take it.

(157) Om du kommer så uppskattar vi att du kommer.

If you come, we appreciate that you come.

Contrary to *om*, *att* can not be used on its own with an adverbial clause. But many conjunctions contain *att* as a part: *därför att* (because), *så att* (so that), *för att* (in order to), *trots att* (although), to mention the most common ones. Many of these are factive and none of them is counterfactual.

In spite of the compatibility of ignorative and conditional interpretations, we cannot explain the distribution of *om* and *att* in adverbial clauses only in terms of the opposition ignorative vs. non-ignorative specification. The properties of an event as conditioning (vs. non-conditioning) and counterfactual (vs. factual) must be seen as independent factors.

We find an opposition between *att* and *om* in yet another type of clause, namely certain exclamative clauses. Compare (158) and (159), two free subordinate clauses with an "exclamative" pronunciation, and (160) to (161) where the subordinate clauses are embedded under an exclamative particle.

(158) Att du inte kan vara tyst!

lit. *That you can not be quiet.*

(159) Om du ändå kunde vara tyst!

lit. *If you only could be quiet.*

(160) Tänk att han klarade det!

lit. *Think that he did it!*

(161) Tänk om han klarar det!

lit. *Think if he does it.*

What we find here is that the *att*-exclamatives express facts along with some emotion caused by a fact, such as joy, irritation, anger, surprise, etc., whereas the *om*-exclamatives (or *optatives*, as they are often called) express a non-fact along with some appropriate emotion such as hope or fear. This goes well together with the distribution of these two items in adverbial clauses. Note that both instances of *om* occur with exclamatives. In (159) we have a counterfactual clause and the speaker's wish for silence is probably coupled with anger over the fact that the addressee is not being quiet. In (161), on the other hand, the emotion is directed towards a future event, which may, or may not, turn out to realize the expressed specification. We understand that in the latter case the event will have a significant emotional effect on the speaker. Thus, just as for adverbial clauses, *om* may signal an unrealized condition, whereas *att* signals a realized cause, although the effects are not explicitly

expressed.

The findings of this section may be summarized as follows. The distinction between the values *att* and *om* of the feature COMP, manifested in the complementizers *att*, on the one hand, and *om* and *ifall* on the other, affects interpretation with respect to one or more of the following different, but related, contrasts: (1) a non-ignorative vs. an ignorative/dubitative reference to an assumed relational token; (2) for factive complements and circumstances this means a commitment vs. non-commitment to the candidate specification; (3) a description of the factual vs. the unrealized or counterfactual (in adverbial clauses expressing causal relationship or comparisons; (4) a non-conditioning vs. a conditioning effect of the specification, were it to be true. Where the two forms have been incorporated in subordinating conjunctions, we also find uses that go beyond these limits. These can be attributed to extensions of the type of relation that the conjunction can express.

6.4 Interrogative vs. Declarative Main Clauses.

6.4.1 The Feature SFORM and its Values. In this section I am concerned with the contrast between Declarative and Interrogative Main Clauses. This contrast is encoded as a contrast in the value of the feature SFORM, and is restricted to finite clauses. SFORM defines the system below, where 'Decl' and 'Int' are the values of interest.

SFORM { Decl, Int, Imp, WhI, WhE, WhR, WhF, Excl, Disl }

The four values associated with different types of Wh-clauses have been discussed in 6.2. 'Imp' is the value for imperative clauses, which by definition are non-finite. 'Excl' is the value for subordinate clauses introduced by a foundation containing the modifiers *sādan* (such) or *sā* (so). 'Disl' is the value for clauses with a left-dislocated constituent. I will not say much about these clause-types here.

I first give a short summary of the interpretation of declaratives and interrogatives in representative utterances and then make a survey of their use in other types of illocutions.

6.4.2 Interrogatives and Declaratives in Questions and Assertions. The interpretation of Declarative and Interrogative clauses of various kinds has been discussed at length in chapter 5. The conclusions drawn there were that the interpretation of these clause-types could be described in terms of two modal dimensions, called domain mode (DMODE) and specification mode (SMODE). The difference in domain mode was represented as a difference between two modal values, Q and ASS, where Q means that the speaker leaves the topical domain in a questioned state, and ASS that it is

left in a specified state, with no need for the next speaker to specify it. The difference in specification mode was described in terms of a scale of commitments, comprising the values IGN, NEUT, BIAS and AFF, where the latter two may be either positive or negative. The Interrogative typically indicates a neutral mode of specification and the Declarative an affirmative mode, but both of them are compatible with a biased mode. The latter case requires special markings or contextual evidence, however.

6.4.3. Other uses of Interrogative clauses.

6.4.3.1 *Conditional Interrogative clauses.* An Interrogative clause can be placed in the foundation of a Declarative clause and then has the same range of interpretations as an *om*-clause. Typically it expresses a condition, as in (1a), but as with *om*-clauses the condition may not have a direct causal relationship to the content of the matrix clause, but rather to the utterance of that content.

(162a) Blir det regn stannar vi hemma.
If it rains, we'll have to stay at home.

(162b) Om det blir regn, stannar vi hemma. = (16) of 6.3
If it rains, we'll have to stay at home.

(163a) Ska sanningen fram är jag inte särskilt pigg på att följa med.
To tell you the truth, I'm not that keen on going.

(163b) Om sanningen ska fram är jag inte särskilt pigg på att följa med.
To tell you the truth, I'm not that keen on going.

It should be noted that the interrogative clause can be used to express a condition only as foundation, not in any other adverbial position:

(164a) Vi stannar hemma om det blir regn.
We'll stay at home if it rains.

(164b) *Vi stannar hemma blir det regn.
lit. We'll stay at home will it rain.

If we have a coordination of two clauses in the foundation, only the first one may have the finite verb in first position. Moreover, the second clause is a subordinate clause without complementizer. This is different from what the case would be if we coordinate main, interrogative clauses in questions, as shown by (166a-b), but the same as in the case of an initial *om*-clause. In the latter case it would be possible to treat *om* as a sister to a coordinated structure of subordinate clauses without complementizers, but then the parallelism between the two cases is lost. Therefore, I assign the descriptors, [COMP *om*] and [SFORM Int], respectively, only to the first

conjunct, whereas the coordinated structure as a whole has no value for these features.

(165a) Om det är någon som frågar och du inte kan svara så ropa på mig.
If anybody asks and you don't know how to answer just call me.

(165b) Är det någon som frågar och du inte kan svara så ropa på mig.
If anybody asks and you don't know how to answer just call me.

(165c) *Är det någon som frågar och kan du inte svara så ropa på mig.
If anybody asks and you don't know how to answer just call me.

(166a) Gillar du pop eller har du någon annan favoritmusik?
Do you like pop or do you have some other favourite kind of music?

(166b) *Gillar du pop eller du har någon annan favoritmusik?

This data suggests that the conditional, interrogative clause is best treated as a positionally restricted alternative to the conditional *om*-clause, which, however, is a main clause with the finite verb in first position. As regards interpretation there is no necessary element of ignorativity, although the clause often expresses something that may be realized, as in (162a) or (165a), and which the speaker may feel uncertain about. But just as with *om*-clauses, the interrogative clause may express the counterfactual, and even sometimes the factual, as in (167) (cf. (146b) of 6.3).

(167) Var det svenskarna som anföll mest, så var det ändå danskarna som gjorde målen.
(Even) if the Swedes were doing most of the attacking, it was still the Danes that scored the goals.

In 6.3 I gave a number of examples illustrating the compatibility between ignorative and conditional interpretations in the case of subordinate clauses. But also main, interrogative clauses show the same phenomenon. For example, it is common in advertisements to address a question to the reader (or listener, viewer depending on the medium) which expresses a condition on membership of the target group, as in (168). As part of an instruction sheet, you may find (169).

(168) Vet du om att du har alkoholproblem? — Då är kanske en terminskurs i terapeutisk miljö på Lida behandlingshem något för Dig.
Are you aware that you have an alcohol problem? — Then a course in a therapeutic environment at Lida Hospital may be of interest to you.

- (169) Blinkar lampan? Då är det fel på inmatningen.
Is the lamp flashing? Then something is wrong with the input.

Similarly, in the dialogue (170) the speaker A makes very much the same point as he would in a single conditional utterance of the form (171):

- (170) A: Är du gift? *A: Are you married?*
 B: Ja. *B: Yes*
 A: Ja, då vet du vad jag menar. *A: Well, then you know what I mean.*

- (171) A: Är du gift så vet du vad jag menar.
If you are married, you know what I mean.

Whatever the reasons for using a direct question, say, getting the attention of those you want to attend, or checking something, the specification expressed in a nexus-question will often turn out to have the status of a condition in relation to an opportunity or course of action expressed by a following utterance. It is quite natural that such a discourse can develop into a syntactic construction, whereby the conditional relationship becomes the main point of the construction (cf. 6.4.3.3.1 for a similar case).

6.4.3.2 *Exclamative Clauses.* In 6.2.2.4 the relation between Ignorative and Exclamative Wh-clauses was discussed. It was found that they should be treated as different, but related constructions, and that there are intermediate cases where an Ignorative interpretation shades into an Exclamative one. The conclusion will be similar as regards the relation between Interrogative clauses and Exclamative clauses with an initial finite verb, i.e. there is a scale of possibilities ranging from emotionally coloured nexus-questions to more or less pure exclamations.

Let us first consider a use of the interrogative clause as a kind of reaction to the unexpected, whether something said or something experienced. Regarded as a question, the utterance borders on the rhetorical, since the answer is evident from the context. The emotional tint varies; it is often quite small, the utterance seemingly just a way to start a conversation or introducing a new topic, but it is never quite without it.

- (172) A: Jag träffade farbror August också. *I also met Uncle A.*
 B: Jaså, lever han än? *Oh, is he still going?*

- (173) Men Ebba gick rakt igenom rummet nu och öppnade salsdörren utan
 att knacka.
 - Ligger du här?
 Hon svarade inte. Det var väl uppenbart. Hon låg här.¹⁰

¹⁰ From Kerstin Ekman, *Änglahuset*, Bonniers, 1979, p. 67.

But Ebba walked straight across the room nu and opened the door to the hall without knocking.

- (lit.) Are you lying here?

She did not answer. It was evident. She was lying here.

(174) *Nämen är det du som kommer!?*

lit. No but is that you coming!?

Instances of the same class are the following phrases, which are frequently heard in conversations when someone is telling a story or relating his views: *Menar du det!?* (Do you mean that!?), *Säger du det!* (Do you say that), *Tror du det?* (Do you think so?).

In many cases where this use of interrogatives occurs it is possible to contrast it with a declarative clause, with interrogative or even assertive tone, e.g., in (173) the speaker could have said *Jaså, här ligger du* (So, here you are) or instead of the interrogatives of the previous paragraph you can put a declarative *Du säger det?* (You say so?) or *Du tror det?* (You think so?). This has the effect of making the utterance more matter of fact and if there is an emotive colouring, it is not one of surprise, but of slight reproach or disagreement.

To focus your addressee's attention to something which is obviously true may have different purposes. With these examples what is said is no news to the addressee; it is the speaker's attitude to what he has experienced which is important. That's why I call them exclamative utterances. However, surprise is connected with disbelief or doubt and makes it appropriate to want to know something more about the relevant fact, e.g., to look for an explanation. By expressing himself in this way the speaker manages to show his attitude, to show what the problematic fact is, and possibly, to engage the addressee in providing more information about it. Thus, the compatibility between interrogative and exclamative features is clearly shown.

Another case where the interrogative clause is the vehicle of an exclamation is in expressions of positive or negative attitudes to something. These exclamatives are usually marked lexically by the presence of an emotive word or phrase, which is used predicatively in a copular construction and focused. In (175a-c) are some illustrations of agreement-seeking exclamations, in which the speaker gives expression to his attitude and invites, not to say expects, the addressee to share this attitude. The negation, as is common also in questions, expresses the strong commitment to the expressed specification. In (176a-b) there is a set of examples which, just like the first class of utterances considered in this section, are reactions to what the speaker has just got to know. But rather than expressing surprise, they express dissociation, reproach or fear.

(175a) *Är den inte söt!?*

How cute it is!

(175b) *Var det inte en fantastisk show!?*

Wasn't it a fantastic show!?

(175c) Är det inte förskräckligt så dom väsnas! *Isn't it a disgrace the noise they are making!*

(176a) Har du blivit galen! *Have you gone mad!*

(176b) Är han inte klok! *Has he lost his mind!*

The exclamations of (175) can be paraphrased by constructions with an exclamative foundation, such as (a) *Så söt den är!* (How pretty it is), (b) *En sån fantastisk show det var* (What a fantastic show it was), etc. and with much less exclamative force by declarative sentences, such as (a) *Den är väl söt!?* (Oh, it's nice, isn't it!?), (b) *Det var en fantastisk show, tycker du inte?* (It was a fantastic show, don't you think?). The exclamations of (176) can also be rendered in declarative form: *Du har blivit galen!*, *Han kan inte vara klok!*, which, in my view, differ from the interrogative ones in stating an insight, although one which is emotionally provoking, rather than displaying disbelief and/or surprise.

Another kind of exclamative is closely related to a rhetorical question in that the opinion of the speaker as regards the correctness of the expressed specification is perfectly obvious. However, in contrast to the cases we have considered so far, the expressed specification is not the one the speaker indicates a commitment to. On the contrary, it is its negative counterpart.

(177) Är det dags att komma nu! *Is it time to come home now!*

Meaning: *"It is not time to come home now!"*

(178) Har jag någonsin ljugit för dig!? *Have I ever lied to you?*

Meaning: *"I have never lied to you"*

In all of these cases the contrast between interrogative and declarative form can be seen as a contrast along the usual dimensions: lack of commitment (or doubt, disbelief) vs. commitment, and adoption vs. transfer of the specifier role, although the speaker's reasons for choosing one or the other is often rhetorical. It would seem, though, that especially in the dimension of surprise, the interrogative is preferably used when the clause expresses a highly unexpected fact and hence a greater surprise, something which makes it possible to argue for a tighter association between interrogative and exclamative interpretations than between declarative and exclamative interpretations. It is clear, however, that exclamative interpretations arise from sources which are independent of the contrast interrogative/declarative, namely in the choice of tone and in the choice of emotive lexical items. Thus, in the syntax I do not assign these structures a special value within the SFORM system.

6.4.3.3 *Indirect directives.* The use of Interrogative clauses to perform requests and other types of directive speech acts have long been noted (cf. chapter 2 and references given there). But very often you can use a corresponding declarative clause, as well,

with or without modifications, and we may then ask what difference in interpretation results. I first consider the case of requests for action and then some other types of directive.

6.4.3.3.1 *Requests for action.* In (179)-(182) The first example of each group is a plain interrogative, the second a negated declarative with appropriate interrogative intonation and the third a non-modified declarative with appropriate declarative intonation.

- | | |
|---|--|
| (179a) Kan du hjälpa mig med väskan? | <i>Can you VP?</i> |
| (179b) Du kan inte hjälpa mig med väskan? | <i>You can not VP?</i> |
| (179c) Du kan hjälpa mig med väskan. | <i>You can VP.</i> |
| (180a) Vill du hjälpa mig med väskan? | <i>Do you want to VP?</i> |
| (180b) Du vill inte hjälpa mig med väskan? | <i>You don't want to VP?</i> |
| (180c) @Du vill hjälpa mig med väskan. | <i>You want to VP.</i> |
| (181a) Är du snäll och tar ut soporna? | <i>Would you be so kind as to VP?</i> |
| (181b) Du är inte snäll och tar ut soporna? | <i>You wouldn't be so kind as to VP?</i> |
| (181c) Du är snäll och tar ut soporna. | <i>You would be so kind as to VP.</i> |
| (182a) Kör du mig hem? | <i>Will you take me home?</i> |
| (182b) @Du kör mig inte hem? | <i>You won't take me home?</i> |
| (182c) Du kör mig hem. | <i>You will take me home.</i> |

The examples of the first three groups contain special forms, such as *kan* (can), *vill* (want to) and *vara snäll* (be kind), which may be called directive markers. This does not mean that they have the same meaning. As can be seen from the examples, and as will be further illustrated below, they can not be used in the same circumstances. For instance, it is hard to use *vill* in a directive with declarative form, as in (180c). Thus, they are not simple formulae, but have different potentials of combination and interpretation. Their non-formulaic nature is also shown by the fact that they can be operated on formally, e.g. be put in the subjunctive, giving us forms such as *Skulle du kunna* (Could you), *Skulle du vilja vara så snäll och* (Would you be so kind as to), etc.

I take it that the directive markers illustrated are known to be parts of requests for action, i.e. that they have this as one established use. In this they are no different from the imperative. They are different from the imperative only in their ability also to be interpreted as (part of) a predication, whether in a question or an assertion.

The simple present tense form of the verb expressing the action can also be used in a request for action, as in (182a,c). It is probably significant that present tense in Swedish is commonly used to refer to the future.

The difference between the Interrogative and the Declarative in these examples is the following. With the Interrogative the speaker shows, at least on the face of it, that he does not take the addressee's compliance for granted. With the declarative he shows that a refusal is not expected. To speak with Brown & Levinson (1978), in both cases the speaker is on record as performing an act that threatens the addressee's face, in particular his want of having his actions unimpeded by others. The interrogative is a sign of redressive action, i.e. a sign that the speaker recognizes the addressee's face wants. The declarative, on the other hand, indicates that the speaker is in a position where such redressive action is not necessary. The reasons for this may vary: the addressee may be subordinate to the speaker, the desired action may not be very imposing, etc.

Directives are analyzed as having topical domains too (cf. 2.2.6). Their topical domain is concerned with the (future) behaviour of the addressee or whoever is indicated. In certain communicative interactions this kind of domain is almost the only one possible, e.g., in master-servant dialogues or a bout of physical training. In other interactions it is the one that talk is most expected to relate to, say, in work situations or lessons of practical skills. Directives differ from assertions, however, in the way the topical domain is specified. The specification of a directive utterance is not telling what is the case, but is an instruction that may or may not be followed. Thus, directives are assigned a domain mode of their own, which I call the impositive mode and abbreviate IMP.

As for modes of specification there is a definite sense in which the speaker can be said to take responsibility for the appropriateness of the mentioned specification. For example, in an order or instruction the speaker guarantees appropriateness, whereas in a suggestion or advice he does not. Although the possibilities are slightly different with directive utterances as compared with assertive ones, I will not elaborate on this here, but use the same scale of values.

To account for the way a speaker is making face-redress a separate modal dimension is needed. I will not attempt a description of this dimension here, only note that this aspect of a directive utterance ought to be represented in its I-structure, and use an attribute IMODE, short for 'mode of imposition' as a token for it.

The I-structure of a directive utterance, such as (179a), can then be rendered as in (183).

(183)	DOM	BASIS DCON DMODE	OBJ2 '<ACT> IMP
	SPEC	REF SMODE IMODE	'Help me with the bags' AFF REQ

We may regard it as part of the interpretation of an Imperative clause that its topical domain is the one suggested for directives. At least this should be one of the primary possibilities. The conventional devices illustrated above, i.e. the verbs *kunna*, *vilja* and *vara snáll* and the present tense can be analyzed similarly, although for them this interpretation needs more co-textual support, in particular an explicit reference to the addressee.

The sentences (179b) and (180b) illustrate one strategy of redressive action, that of being pessimistic (Brown & Levinson, *ibid.*, p. 178), i.e. of coming out as assuming that the addressee has the expressed reason for not complying with the request. It is as if the speaker makes a check just in case the situation happens to be contrary to the way he portrays it. It is heard as more polite, or in any case, more elaborate than the interrogative request.

The use of Interrogatives in Requests for action has been accounted for in terms of *preference structure* (Levinson, 1983). Preference organization is at work at different levels. One kind of preference organization concerns the rating of different responses to initiating speech acts. For example, refusals of requests are dispreferred. Therefore, requests that are in danger of being refuted should be avoided and one way of avoiding them is to find out in advance whether they are likely to be refused or accepted by means of a pre-request. The topic of the pre-request is then a reason for not accepting the request, such as inability. The following dialogue from Levinson (*ibid.*, p. 358) illustrates the strategy:

(D1)

A: Hullo I was wondering whether you were intending to go to Popper's talk this afternoon

B: Not today I'm afraid I can't really make it to this one

A: Ah Okay

B: You wanted me to record it didn't you heh!

A: Yeah heheh

B: Heheh no I'm sorry about that.

As Levinson points out it is evident that "B treats A's first utterance as a transparent

pre-request, hence the apologies typical of dispreferreds and the guess at the request that would have been relevant had B been able to attend."

A preferred sequential structure of a succesful request dialogue is then the following:

- (I)
- Position 1: Pre-request
- Position 2: Go-ahead
- Position 3: Request
- Position 4: Compliance

However, this is not the most preferred sequential structure. Preference organization operates not only over alternative responses, but also over alternative sequential organizations. Given that a pre-request must be transparent as a pre-request (as it is in D1), there are other options available to the addressee than just a mere positive answer to the pre-request. He may offer his services to the requester, which gives us a sequential structure of type (II), or, if the pre-request is transparent in all details, he may comply to the intended, but non-overt request (structure III).

- (II)
- Position 1: Pre-request
- Position 2': Offer
- Position 3': Acceptance of Offer

- (III)
- Position 1: Pre-request
- Position 4: Response to non-overt Request

Given that there exists a preference for avoiding overt requests altogether, (II) and (III) is ranked higher than (I). Moreover, (III) is ranked higher than (II) on the grounds that it satisfies the requester's wants in the simplest and most efficient way possible. If this is correct we would expect a tendency to construct pre-requests in such a way that they contain all the information necessary to understand the intended request. Eventually, certain forms of pre-requests tend to be conventionalized and even to incorporate face-redressing features of requests.

The argument is then that the (a)-sentences above, at least those of (179)-(181), are pre-requests worded transparently so as to enable the addressee to respond by a compliance of the request (a Position 4 response) or, in the worst case, by affirming a reason for non-compliance (a negative Position 2 response). Levinson then goes on to say that the problem of so called indirect speech acts, or at least indirect requests, disappears (*ibid.*, p. 363): "We can now say that so-called indirect speech acts are position 1 turns — pre-requests — formulated as to expect position 4 responses in second turn. Questions about whether they have 'literal' or 'indirect' (or both) forces or meanings simply do not, on this view, arise. Such position 1 turns mean whatever

they mean; that they can be formulated so as to project certain conversational trajectories is something properly explored in the sequential analysis of successive turns." While I do agree that concepts such as 'literal' and 'indirect' are out of the place, I don't think we can escape their multiple classification as being both questions and requests. An utterance of (179a) is well described by either *A frågade B om hon kunde hjälpa honom med väskorna* (A asked B whether she could help him with the bags) or *A bad B att hjälpa honom med väskorna* (A asked B to help him with the bags). To insist on the primacy of the function 'pre-request' seems to me to assume yet another literalness hypothesis. In many contexts it would be hard to take the conventionalized constructions (179a) and (180a) as simple pre-requests, i.e. to respond by a simple *yes* or *sure* without complying with the request would be deviant. Furthermore, the analysis in terms of preference structure does not apply to all cases of so called indirect speech acts; e.g., it can not explain the interpretation of the declarative (c)-sentences above as requests, since they can not possibly be pre-requests.

Hellberg (1985), directing a similar critique against Levinson, proposes to treat indirect speech acts as "amalgamations". Hellberg assumes the literal force hypothesis and describes the (a)-sentences above as simultaneously literal questions and literal requests. The correctness of the first description he attributes to the clause-type and the correctness of the second to a supposed jussive intonation. The reliance on intonation to defend literal meanings I find dangerous, as it assumes that utterances are what they are on the basis of the presence of individual features independent of context. It is also clear, I think, that in this case we do not need a particular jussive intonation to type the utterance as a request. The term amalgamation gives a good characterization of the construction of these forms, however. They are built to meet multiple demands. In the case of pre-requests incorporating features of requests the demands are, apparently, the following: (i) the need to be sufficiently specific about the requested action; (ii) the preference for avoiding explicit, unequivocal requests. The latter demand is served by an utterance which can pass as a non-request, if the addressee would happen to respond negatively.

This view of conventionalized constructions like those of (179)-(182) is similar to the one espoused by Brown & Levinson (1978: 137) in seeing them as means of resolving a clash between conflicting wants. It is different only in treating the request interpretation as being of the same status as the question/assertion interpretation, where B&L regards the first as indirect, although conventionalized, and the second as literal. Furthermore, it seems to me that the same clash of wants can be taken as an explanation for the use of non-transparent pre-requests, leading to sequences of the structure (I), although, here, the requester is acting more carefully. Requests are then no different from questions in that the things you have to do in order to perform the act properly, may be distributed across different turns, or expressed in one turn.

By regarding illocutionary acts, as well as sentences, as complex structures, we can allow for multiple functions and multiple illocutionary categorizations, in a straightforward way. An utterance is a question if it can be so interpreted in its

context-of-utterance, which means that an ignoratively presented domain should be possible to identify for the addressee. It is a request if it can be so interpreted, i.e. if the speaker specifies a behaviour to be followed by the addressee. In the case of (179a) the question interpretation is supported by the clause-type, by the intonation and by one possible meaning of *kan*, whereas the request interpretation is supported by a slightly different, but related, meaning of *kan* and its arguments, *du* (you) and an explicit specification of an action. The point of the (a)-sentences is that they support both interpretations. In a way, a response such as *Tyvärr, det kan jag inte* (I'm sorry I can't) would count as a refusal, but it is a way of refusing that the requester explicitly has made safe by employing an ambiguous construction. Thus, it differs from a directive in imperative form or, for that matter, declarative form, which does not make the same allowances.

The status of (181a) as a pre-request is doubtful. It is difficult to refuse a request on the grounds that you are not kind. Rather, refusing counts as being unkind and complying counts as being kind. The basis for the use of the expression *vara snäll* (be kind) is instead the strategy of fulfilling the wants of the addressee, in this particular case, the desire to be liked or cherished (Brown&Levinson, 1978:134). Nevertheless, the "pessimistic", negative form (181b), works here as well, something which may be taken as evidence that its use in requests is a conventionalized strategy for diminishing imposition.

(182a) is not a pre-request either. It illustrates a very common way of requesting between equals. Put into declarative form, as in (182c), it becomes as impositive as a request in imperative form. It has no "pessimistic" equivalent, probably because the negation in this structure is interpreted as part of the requested action. Thus, if anything, (182b) is a request not to be taken home, not a request to be taken home.

6.4.3.3.2 *Requests for obtaining goods or money.* Requests for goods (or value, etc.) work very much the same way as requests for action, which is natural, given that delivering goods is a type of action. Specifically, we find the same difference between Interrogative and Declarative clauses:

(184a) Har du en penna?

Have you got a pen?

(184b) Du har inte en penna?

You haven't got a pen?

(184c) Du har en penna.

You've got a pen.

(185a) Pappa, får jag en glass!

lit. *Dad, get I an ice-cream.*

(185b) @Pappa, jag får en glass.

lit. *Dad, I get an ice-cream.*

(185c) Pappa, jag får en glass?

lit. *Dad, I get an ice-cream?*

(186a) Finns det tjugo öre?

lit. *Is there 50 öre?*

(186b) Det finns inte tjugo öre?

lit. *There isn't 50 öre?*

(186c) @Det finns tjugo öre.

There is 50 öre.

(184a) and (186a) can be taken as conventionalized pre-requests. They can not adequately be answered by a simple 'No', but require the addition of some phrase such as *tyvärr* (unfortunately) or *Jag är ledsen* (I'm sorry). (185a) is more impositive. I take it as a way of expressing the topical domain from the benefactor's point of view and is thus similar to, but less explicit, than (182a), although *få* (get) has other meanings as well, e.g., as indicating permission. This ambiguity in *få*, I believe, makes (185c) sound more like a Request than an Order, in spite of being declarative. However, it still takes more for granted than (185a).

As this example shows, it is important that we do not regard Interrogative and Declarative clause-types as absolute indicators. Declarative clause-type and directive force does not automatically make the utterance an order. Conversely, Interrogative clause-type is not correlated with some absolute degree of politeness or requestive force. What we are saying is that, where the contrast is possible, the Interrogative tends to be less imposing, to take compliance less for granted, than the Declarative.

A common way of requesting someone to stop or change his actions is by means of constructions referring to necessity, as in (187) and (188). They can be analyzed as conventionalized pre-requests. Unlike the examples with *kan* and *vill* the action specified is not the action that is requested, but the action which motivates the (pre-)request. *Kan* and *vill* cannot, for obvious reasons, be used in the same way.

(187) Måste du spela så högt?

Do you have to play that loud?

(188) Är det nödvändigt att ni är precis här?

*Is it really necessary that you
play just here?*

An utterance such as (187) may be characterized as either a request or an order, depending on the tone. It is more imposing than, for instance, (179a) or (180a). This is probably due to the fact that it is more imposing to interfere in an action that someone else is doing by his free will, than to ask him to engage in a new action on your behalf. The corresponding declaratives to (187) and (188) must be negative.

(189) Du måste inte spela så högt!

You don't have to play that loud.

Interestingly, *måste* can be used also with a specification of the requested action, in a declarative request (or entreaty), as in (190). In this case there is only a negative interrogative counterpart, as in (191), the force of which is different, however. In (190) the speaker takes it upon himself to force the addressee to go, but the *måste* of (191) can not be so interpreted.

(190) Du måste gå!

You have to go!

(191) Måste inte du gå?

Don't you have to go?

6.4.3.3.3 *Other types of indirect directives.* We find differences in interpretation between Interrogatives and Declaratives in other kinds of directives, too. These differences can basically be attributed to the same dimensions of imposition and commitment. First consider reminders.

(192a) Får jag påminna dig att Anna fyller år i morgon.

May I remind you that it is Anna's birthday tomorrow.

(192b) ?Jag får påminna dig att Anna fyller år i morgon.

I may remind you that it is Anna's birthday tomorrow.

(192c) Måste jag påminna dig att Anna fyller år i morgon.

Must I remind you that it is Anna's birthday tomorrow.

(192d) Jag måste påminna dig att Anna fyller år i morgon.

I must remind you that it is Anna's birthday tomorrow.

(192a) can be analyzed as an amalgamation of a pre-reminder and a real reminder. Thus, we could have a three-turn sequence of the following kind, instead of a single utterance.

(193)

A: Får jag påminna dig om en sak.

May I remind you of something?

B: Javisst.

Sure.

A: Anna fyller år i morgon.

Tomorrow is Anna's birthday.

By amalgamating the reminding to the pre-reminding the latter of course becomes totally *pro forma*. Still it does its work as being face-redressing. To use the declarative instead gives a presumptuous impression. The declarative goes better together with *måste* (must), which gives the impression that the speaker can not help being impositive. Here, the interrogative does not sound well. In contrast to (192c), (192d) implies that the addressee is at fault, which is not giving face, but taking it away.

With requests for permission it seems to be in the nature of things that you can not order someone to give you permission. If you are in that position, you already have permission, and so no order is necessary. Therefore, a declarative is hard to use here, as it suggests that permission will be granted.

(194a) Får/Kan jag röka?

May/Can I smoke?

(194b) @Jag får/kan röka.

I may/can smoke.

- | | |
|---|--|
| (195a) Har du något emot att jag röker? | <i>Would you mind if I smoked?</i> |
| (195b) Du har inget emot att jag röker? | <i>You wouldn't mind if I smoked, would you?</i> |

Suggestions and advice may be requested and need very little face-redressing in such circumstances. Even a plain Imperative is possible as in *Vad tycker du jag ska göra? -Ta tåget* (What do you think I should do? — Go by train). When advice is volunteered, the speaker has to be more careful, as he can not know whether it will be well received. Another feature of suggestions and advice is that their topic is usually given in advance, although there are exceptions, as in (197). Their primary use is nevertheless to evaluate a particular specification and to present it to the addressee as a possible course of action. Thus, clause-type signals mode of specification and/or mode of imposition under a directive interpretation of the utterance.

- | | |
|--|--|
| (196a) Skulle du kanske kunna ta tåget istället? | <i>Wouldn't it be possible to go by train instead?</i> |
| (196b) Du skulle kunna ta tåget istället. | <i>You could go by train instead, you know.</i> |
| (197a) Ska vi släcka ljuset? | <i>Shall we put the lights out?</i> |
| (197b) @Vi ska släcka ljuset. | <i>Impossible as suggestion</i> |
| (198a) @Ska du ta tåget? | <i>Will you go by train?</i> |
| (198b) Du ska ta tåget. | <i>You should go by train.</i> |

As is shown by (196a), a suggestion may be quite elaborate, using subjunctive forms as well as interrogative clause-type. This I regard as a playing down of the speaker's commitment to his suggestion, and a marking of his awareness that the addressee is the one that makes the decisions.

As a final type of directive, I consider offers. Offers are of course also commissive speech acts, but they suggest a certain course of action to the addressee and are in that sense directive. They are hence also face-threatening acts.

An offer is a speech act in which the speaker commits himself to carrying out some action on the condition that the addressee accepts it. In an utterance that gives expression to the action both an interrogative and a declarative are therefore naturally appropriate. The interrogative is natural since a specifying response is sought from the addressee. The declarative is natural since the speaker is committing himself to performing the action. The effects on interpretation of using one instead of the other is a matter of emphasis. The declarative puts the emphasis on the speaker's commitment, and the interrogative puts it on the speaker's subordination to the addressee. But the same responses are possible; either (200a), (200b), (201a) or (201b) can be responded by a *Nej, det behöver du inte* (No, thank you, you don't have to) or

a *Tack, det var snällt* (Thank you, that is very kind).

(199a) Får det lov att vara en smakbit? *May I offer you a bit to taste?*
 (199b) @Det får lov att vara en smakbit. *I may offer you a bit to taste.*

(200a) Kan jag hjälpa till? *Can I help you?*
 (200b) Jag kan hjälpa till. *I can help you.*

(201a) Ska jag hjälpa dig med väskorna? *Shall I help you with your bags?*
 (201b) Jag ska hjälpa dig med väskorna. *I'll help you with your bags.*

(202a) @Hjälper jag dig med väskorna? *Do I help you with your bags?*
 (202b) Jag hjälper dig med väskorna. *I'll help you with your bags.*

Of course, in certain situations the offerer may take acceptance for granted, and just perform the action without waiting for acceptance. In that case the offer is likely to be verbalized by a declarative clause. For instance, after saying (201b) or (202b) the speaker may just grab the bags and carry them away. If on the other hand an accepting response is uncertain, the offer being impositive to a high degree, the interrogative is the more appropriate.

Offers are closely related to requests, in the following way. In both cases an agent is to act on behalf of some benefactor. With an offer the agent takes the initiative to propose that the act is performed and awaits a response. With a request the benefactor takes the initiative of proposing to the agent that the act is performed and awaits a response. What is common to vehicles of offers and requests is that an agent and an action, which the agent will perform in the case of consent, must be indicated in some way. Furthermore, the relation between agent and action as potential rather than actual need also to be indicated. It is an interesting question whether the same indicators of potentiality occur in both offers and requests, or whether the difference between offers and requests determines the choice.

Our illustrations so far tell us that *vilja* and *vara snäll* are confined to requests, whereas *kunna* and the present tense can occur with both. Similarly the subjunctive form *skulle ... vilja* is restricted to requests, whereas *skulle ... kunna* is possible with both requests and offers. On the other hand the verb *ska* (shall, will) can only be used with offers. Compare:

(203a) *Ska du hjälpa mig med väskorna? *Will you help me with my bags?*
 (203b) Jag ska hjälpa dig med väskorna. *I will help you with your bags.*
 (203c) Ska jag hjälpa dig med väskorna? *Shall I help you with your bags?*

6.4.4 *Conclusions.* For the absolute majority of cases where Main Interrogative clauses and Main Declarative clauses are contrasting options, their effect on interpretation can

be described in terms of different values on one or more modal scales. The first is a scale of domain mode, where the Declarative indicates that the speaker provides information on some topical domain and the Interrogative indicates that the domain is raised as a topic, although not informed upon. The second is a scale of commitment to the candidate specification used, where the Declarative indicates a strong commitment and the Interrogative a non-commitment. These scales are interrelated, since usually the speaker can inform only if he is committed to a certain specification. However, at other times a speaker may be forced to specify a domain without being committed to any particular specification and, conversely, may wish not to give the information, although he has it available.

Specifications can apply in different ways to different types of domains. For instance, the domain of an assertion is related to the world as it is, whereas the domain of a request is related to an as yet unrealized action. In the same way the standard of correction that specifications are measured by differs, and hence also the kind of commitments that participants can have. For an assertion the relevant standard is truth, whereas for an order it would be appropriateness. Such differences I represent as differences in the properties of domains, in particular in the two different DMODE values ASS and IMP.

Within the directive class of utterances, the choice between Interrogative and Declarative clause-type affects a third modal scale, the modes of imposition. I have not attempted to give a detailed description of this dimension, merely noted its relevance for the interpretation of clause-types.

In the case of the Interrogative used as a conditional clause, we must also invoke other aspects of interpretation. Although an ordinary interrogative is compatible with a conditional interpretation, its use to express conditions is so conventionalized that it must be recognized as a special case.

I generally do not associate the two clause-types with absolute values along these scales. That is not possible, since so many other factors play a role for the total evaluation of the utterance: the domain and its territorial classification, the details of the tone and the use of other modal markers.

SUMMARY

The basic aim of this study has been to contribute to the development of a linguistic theory of speech acts, i.e. a theory which explains how linguistic expressions function as signs, or sign features, of illocutionary acts such as questions, assertions and directives.

A second aim has been to find out what properties characterizes the question as an illocutionary act and to give a fairly comprehensive account of its grammar in one language, viz. Swedish. This aim relates to the first as a case study, but also, to my mind, has an intrinsic interest, given the importance of questions in our daily communicative activities.

The term *question*, and its Swedish counterpart *fråga*, has a characteristic polysemy, which it shares with other words of the same conceptual field, such as *statement* or *promise*; it may refer to a kind of communicative act or to a kind of conceptual object. In the latter sense the word *question* is roughly equivalent to words such as problem, issue or matter. Moreover, for any instance of the communicative act there will generally also be an instance of the conceptual object (although not vice versa), so an investigation of questions as acts must also attempt to characterize questions as conceptual objects, i.e. investigate the semantics of questions. That investigation has been a third aim of this study.

The first chapter gives an overview of some current models for the role of grammar in the expression of illocutionary acts. I start with Searle's conception of illocutions and Illocutionary-force-indicating-devices (IFIDs), which is strictly speaking not a linguistic theory of speech acts, but which has influenced linguistic theorizing a great deal. I then consider other models, both within generative linguistics and Artificial Intelligence.

I argue that none of these models give a satisfactory account of the role of language in speech acts and trace the problem to their common assumption of a literal, or context-free, meaning of putative IFIDs, which is treated as a non-detachable property of any utterance in which an IFID occurs. Whether this non-detachable meaning is expressed directly in terms of illocutionary force, or in terms of something more abstract than illocutionary force, there are serious difficulties. In the first case we get counterintuitive and far-fetched descriptions of many utterances, such as those of (1)-(2), which, apart from the interrogative sentence type, have very little in common

with questions. In the second case the interpretation of utterances, such as (3)-(4), as questions is left unexplained.

- | | |
|-----------------------------------|--|
| (1) Men får jag komma in här, ... | <i>But may I say something here, ...</i> |
| (2) Är du inte klok! | <i>Have you gone mad!</i> |
| (3) Är Lisa hemma? | <i>Is Lisa at home?</i> |
| (4) Hur mycket är klockan? | <i>What time is it?</i> |

Instead I argue for a model of the relation between grammar and speech acts, which employs no context-free, literal meanings. Interpretation is regarded as an inferential process in which the context of the utterance plays an important part and meanings are regarded as prototypical rather than absolute and negotiable in the process of interpretation. As regards the meaning of IFIDs and other semantically primitive expressions, the essential features of the model are as follows:

1. A meaning of a primitive expression, whether a formative or a type of construction, is concrete and conceived of as established use and "indexed" by factors of the situation of use, such as activity type, type of communicative behaviour, genre and knowledge domain. As a consequence, polysemy is regarded as a common feature of primitive expressions.
2. Sentences and other complex structures do not have meaning in the same sense as primitive expressions. Being new creations they can not have an established use, but are instead assigned a content by an interpreter in a definite context.
3. As context always enters into interpretation there can be no strict principle of compositionality. What we can require is that interpretations of utterances are justified by the meanings of their parts and are internally coherent, i.e. the interpretation of the parts is seen to be coherent with the interpretation of the whole.
4. Many illocutionary acts, including questions, are complex acts that require complex structures to be signalled. Consequently, different parts of the linguistic structure may make different contributions to the overall illocutionary interpretation.

The second chapter provides an analysis of questions, both as illocutionary acts and as conceptual objects. The analysis of questions as illocutionary acts is based on the idea that illocutionary acts are best described in terms of their effects on a dialogue state. No doubt there is a correlation between illocutionary acts and intended perlocutionary effects, but in the case of questions, with their variation in use, I argue that no

particular perlocutionary effect can be singled out as the one defining questions. Instead I propose a characterization of questions in terms of topics and their mode of introduction into the discourse:

Given that uptake is secured, the fact that a speaker, S, has asked an addressee, R, a question, entails that the following effects have been produced:

- i. S has introduced a topic, T;
- ii. S has not given information on T;
- iii. (a) R has been given the task to search for information on T,
and (typically) (b) the task to provide S with that information.

I further analyze the notion of topic in terms of a technical notion of *domain of specification*. A domain of specification is basically given by an object or event, referred to as *the basis*, and a way to talk about that type of object or event, referred to as *the domain concept*. To give information on the domain is to *specify* it, or to provide a *specification*. With this analysis the characterization above is reformulated as follows:

- i. S has introduced a domain, D, as topic;
- ii. S has not specified D;
- iii. (a) R has been given the task to search for an appropriate specification of D, and (typically) (b) the task to provide S with that specification.

The notions of basis, domain concept and specification are used also in the characterization of questions as conceptual objects. Taking note of the fact that these occur also outside communicative activities, but always in situations where someone is acting so as to be relieved from a state of ignorance, i.e. a state of being without appropriate specifications, the characterization given is:

A *question* is a domain of specification which is (a) perceived from an ignorative perspective, and (b) considered as a target of specification.

Moreover, questions can be contrasted with assertions in terms of how the speaker acts with respect to a certain domain and a certain specification. Thus, while questions and assertions are analysed into the same basic components, they differ in the way the speaker relates these components to the discourse and to himself.

In the third chapter I take note of some contextual factors that are important for the interpretation of utterances as questions. The chapter contains little that has not been said by others, except a suggestion to improve Labov's distinction between A- and B-events by formulating it in terms of domains. I also discuss different proposals for

the representation of context and adopts a much simplified, but transparent way of doing this, which is used in the following chapters.

Chapter 4 is devoted to the grammatical description of *the interrogative structures* of Swedish, i.e. those constructions that suggest or support question interpretations. That Swedish, as many other languages, has particular clausal constructions, both main and subordinate, for the expression of nexus-questions (Yes-No-questions) and x-questions (Wh-questions) is of course a rather uncontroversial fact, but the number of interrogative structures is in fact much greater than is usually recognized, especially in the case of x-questions. Also, not all interrogative structures are clauses, or even verbal projections. Although the clause is a primary structural unit, there is no reason to treat it as the canonical communicative unit. Thus, for instance, to account for NPs conveying questions by a derivation involving transformations on clauses is to look at language with an unwarranted structural bias. The relation between the NP and its interpretation is a functional one which should and can be accounted for directly, with no need to introduce a clause as an intermediate structure.

For the grammatical description I use a context-free grammar employing complex symbols in the manner, but not quite in the spirit, of Gazdar et al. (1985). A node of the structural description contains a set of attributes with corresponding values that give a paradigmatic description of the string dominated by the node. The possible values of an attribute are regarded as a system of contrasting choices in much the same way as in Systemic grammar (Halliday, 1961; Winograd, 1972). A value, or value combination, may in turn be associated with one or several meanings via specific rules of interpretation.

The grammar employs rules of the following kinds: feature co-occurrence restrictions which state interdependencies between values of different attributes, context-free rewrite rules that are interpreted as systemic realization rules, general principles of value instantiations, which state general conditions on realization rules and feature specification defaults. It gives a moderately large coverage of Swedish, leaving out many phenomena which are not directly relevant to the description of interrogative structures. Some phenomena which are relevant to the description of interrogative structures have also been left out, the most important being multiple gaps.

The purpose of the grammar has been to provide a uniform and explicit framework for the linguistic description of the structures that are of interest to me in this study. The linguistic description includes syntactic structure, formatives and a token description of intonation. The grammar is not highly original and, while aiming for descriptive adequacy, is the result of arbitrary descriptive decisions at certain points. Still it gives a detailed and integrated linguistic description of a fragment of Swedish, associating a large set of strings with structural descriptions, or *utterance structures* (*U-structures*) as I call them, which can be used in a formal rule system modelling utterance interpretation.

In chapter 5 the different interrogative structures are described functionally, that is, from the point of view of how they function as question vehicles. The description is made within a simple model of interpretation, where the content assigned to an utterance by an interpreter is represented by means of an *interpretation structure* (or *I-structure*, for short). The basic format of I-structures for simple questions and assertions is the following, where the dots are place-holders for values that are to be assigned.

(5: 44)

DOM	BASIS	...
	DCON	...
	DMODE	...
SPEC	SMODE	...
	REF	...

The attributes dominated by DOM describe the topical domain of an utterance and those dominated by SPEC describe the corresponding specification. The value of BASIS is a description of the object or event taken as basis and the value of DCON is the domain concept. The illocutionary properties of an utterance are generally characterized by modal attributes, whose values represent different ways of doing things in communication. The attribute DMODE, for *domain mode* encodes the distinction between putting up a domain for specification, as in a question, and actually providing information on it, as in an assertion. The attribute SMODE, for mode of specification, encodes the speaker's signalled evaluation of the appropriateness of the specification that he mentions, if any. The value of the attribute REF is that specification. Other possibly occurring attributes are discussed in the text.

The I-structure for an utterance is derived on the basis of the U-structure, an interpretation of the context encoded in a *Context structure*, and a set of rules of interpretation some of which are related to specific formatives or grammatical features and others of which are of a general nature. The rules pertaining to the crucial interrogative features associate them with a list of alternative modal values where the alternatives may be ordered and contextually constrained. The aspects of context that are taken into account in this discussion are restricted to current topics and current salient referents.

The interpretation procedure is illustrated by the derivation of an I-structure for a simple instance of each interrogative structure that has been identified. The chapter ends with a discussion about how semantically complex questions, such as relational questions and multiple questions, could be accounted for in the model.

The purpose of the final chapter is to demonstrate the extent of the polysemy of the

most important structural interrogative features and to attempt to demarcate the uses that can be assimilated to the interrogative use from those that can not. I am also concerned with explanations for this polysemy and propose one general explanation and some particular explanations relating to specific cases. The interrogative features I consider are the following:

1. Wh-words and Wh-clauses,
2. the complementizer *om*, 'if', 'whether',
3. the verb-first order of main, interrogative clauses.

As for the Wh-words I argue, following Wierzbicka (1980), that their use in questions is but one case of a more general category of *ignorative* uses, which comprises questions, subject-matter references, introspective expressions of the type *what'sitsname*, "ignorative" references to facts, or putative facts, with many classes of verbs relating to knowledge, learning and unlearning, communication, relevance and interest, and dependencies. It also includes all uses of the Wh-clauses that have been called *Nescio*-sentences (von Bremen, 1983), which in Swedish are marked by the occurrence of the adverb *nu* (now), and the class of generalizing Wh-clauses, in Swedish marked by the adverb *än* (-ever). Exclamative Wh-clauses as well as the Wh-clauses of Pseudo-cleft constructions have certain properties in common with ignorative Wh-clauses and can be explained as developments from ignorative uses, but differ in other respects and so must be treated as special uses. Relative Wh-clauses and free Wh-relatives, on the other hand, differ considerably from ignorative Wh-clauses and so the use of Wh-words in these clauses must be explained on other grounds.

The interrogative uses of *om* are described as ignorative-dubitative. This means that they have an ignorative character, but are special in bringing one or several particular specifications into focus. Although the use of *om* in conditional and concessive clauses can be seen as a development of an ignorative use, it must be treated as a separate case. The use of *om* in exclamative (optative) utterances is also a separate case, but related to its use in conditions.

The verb-first main clause is also ignorative-dubitative, but has a more definite interrogative character, i.e. as a question vehicle it is associated with the raising of a question, not just a reference to it. Other uses of the verb-first main clause are associated with other interpretations, however, either in conjunction with an interrogative interpretation or with a replacement of it. For instance, certain exclamative uses of the verb-first main clause can be said at least to invite agreement, whereas others have the character of comments or statements. In either case the clause-type is also a signal of surprise or some other such emotion. With directive utterances choice of clause-type is of relevance for their interpretation along the dimension of face-redress (Brown&Levinson, 1978), whereas the possibility of hearing it as a question may, or may not, remain. A special, and syntactically peculiar, use of the verb-first main clause is when it expresses a condition in the foundation of a declarative clause.

In the beginning I said that the purpose of this study is to contribute to a linguistic theory of speech acts, which can be taken as one important aspect of the more general problem of the relation between linguistic structure and communicative function. Whether my contribution is a valuable one or not is something I think should be left to the reader's own judgement, but I would like to end by arguing for the need of studies of this kind. Generative grammar has uncovered a number of grammatical phenomena to be described and has also succeeded in developing means for their formal description, but has hardly contributed much to the understanding of how grammar is used in communication. As regards semantics the same interest in the development of formalisms for representation of structure and the same neglect of actual language use can be seen. In this case the neglect for language use is more devastating, however, since a concept of meaning that cannot be related to understanding and interpretation is of doubtful value.

On the other hand there has been a certain neglect, not to say suspicion, of grammar by many non-linguists who have studied human communication. If we are only interested in the function of utterances and not in the means of expression, this may be justified, but hardly otherwise. No doubt there are many non-linguistic factors that enter into the interpretation of utterances, but the role of language is also important. And what I have done in this study is to trace down that role for a few linguistic features of relevance for questioning and related speech acts. In doing so I have allowed myself a number of radical simplifications and left several loose ends dangling, both in the grammar, in the account of context and in the account of interpretation. My excuses for this are that I have not wanted to include more aspects than I could reasonably cope with and that human language is, after all, a very complex phenomenon. Still, I have at least convinced myself of the wisdom expressed in the following words from Eco (1984: 22).

Those who oppose a *pragmatics of discourse* to a *semantics of sign units* shift the attention from the systems of signification to the process of communication /.../; but the two perspectives are actually complementary. One cannot think of the sign without seeing it in some way characterized by its contextual destiny, but at the same time it is difficult to explain why a certain speech act is understood unless the nature of the sign which it contextualizes is explained.

NOTES ON NOTATION

The following symbols are used to mark the status of linguistic examples:

- * grammatically ill-formed;
- ? of questionable grammatical status;
- @ grammatically wellformed, but inappropriate for the intended use.

Italics are used for the following purposes:

- (1) to mark object language words and expressions, when they occur in the text;
- (2) to mark technical terms and other terms which are used with a special meaning, when they are introduced in the text for the first time and when they are being defined;
- (3) to mark words and expressions of special interest in sentences which are used as illustrations;
- (4) for the English translations of Swedish examples.
- (5) for headings of subsections.

The context should make it clear which marking is intended.

Bold face is used

- (1) for headings of chapters and sections;
- (2) for words in the text which are given special emphasis.

CAPITALS are used

- (1) for headings in tables and lists;
- (2) for accented words in certain example sentences.

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